Mathematics

Primary 2

1st term 2027

D.M.RAZK
موقع الدكتور محمد رزق معلم الكيمياء التعليمي

CONTENTS

CHAPTER 1 Graphs and Tables

Lesson 1: Graphs and Tables ....
Lesson 2: Reading Graphs and Tables ....
Lesson 3: Comparing Graphs ....

CHAPTER 2 Vertical Addition

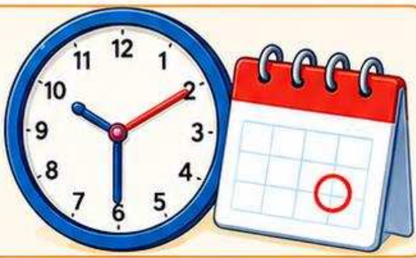
Lesson 1: Vertical Addition (Part 1) ....
Lesson 2: Vertical Addition (Part 2) ....
Lesson 3: Vertical Addition (Part 3) ....
Lesson 4: Vertical Addition (Part 4) ....
Lesson 5: Vertical Addition (Part 5) ....

CHAPTER 3 Vertical Subtraction

Lesson 1: Vertical Subtraction (Part 1) ....
Lesson 2: Vertical Subtraction (Part 2) ....
Lesson 3: Vertical Subtraction (Part 3) ....
Lesson 4: Vertical Subtraction (Part 4) ....
Lesson 5: The Relationship Between Addition and Subtraction ....

CHAPTER 4 Time and Elapsed Time

Lesson 1: Time and Elapsed Time (Part 1) ....
Lesson 2: Time and Elapsed Time (Part 2) ....



D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

CONTENTS

CHAPTER 5 Units of Length

Lesson 1: Units of Length (Part 1) ....
Lesson 2: Units of Length (Part 2) ....
Lesson 3: Units of Length (Part 3) ....
Lesson 4: How to Draw a Straight Line Measuring the Lengths ....

CHAPTER 6 Numbers Greater Than 100

Lesson 1: Numbers Greater Than 100 (Part 1) ....
Lesson 2: Numbers Greater Than 100 (Part 2) ....
Lesson 3: Numbers Greater Than 100 (Part 3) ....
Lesson 4: Numbers Greater Than 100 (Part 4) ....
Lesson 5: Numbers Greater Than 100 (Part 5) ....
Lesson 6: Numbers Greater Than 100 (Part 6) ....
Lesson 7: Numbers Greater Than 100 (Part 7) ....
Lesson 8: Numbers Greater Than 100 (Part 8) ....
Lesson 9: Numbers Greater Than 100 (Part 9) ....
Lesson 10: Numbers Greater Than 100 (Part 10) ....

CHAPTER 7 Units of Capacity

Lesson 1: The Liter (L) and the Milliliter (mL) ....
Lesson 2: The Liter (L) and the Capacity ....
Lesson 3: The Milliliter (mL) and the Capacity ....

CHAPTER 8 Addition and Subtraction Using the Standard Algorithm

Lesson 1: Addition and Subtraction Using the Standard Algorithm (Part 1) ....
Lesson 2: Addition and Subtraction Using the Standard Algorithm (Part 2) ....
Lesson 3: Addition and Subtraction Using the Standard Algorithm (Part 3) ....
Lesson 4: Addition and Subtraction Using the Standard Algorithm (Part 4) ....
Lesson 5: Addition and Subtraction Using the Standard Algorithm (Part 5) ....
Lesson 6: Addition and Subtraction Using the Standard Algorithm (Part 6) ....

CHAPTER 9 Methods of Mental Calculation

Lesson 1: Methods of Mental Calculation (Part 1) ....
Lesson 2: Methods of Mental Calculation (Part 2) ....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

CHAPTER 1

GRAPHS AND TABLES

Organizing Data and Reading Charts

LEARNING OBJECTIVES

Lesson 1 – Graphs and Tables (Part 1)

- Organize data using pictographs.
- Read pictographs and answer questions.
- Fill in missing data in tables.

Lesson 2 – Graphs and Tables (Part 2)

- Answer questions based on graphs.
- Interpret and analyze data.
- Solve problems from real life.

Lesson 3 – Comparing Data (Part 3)

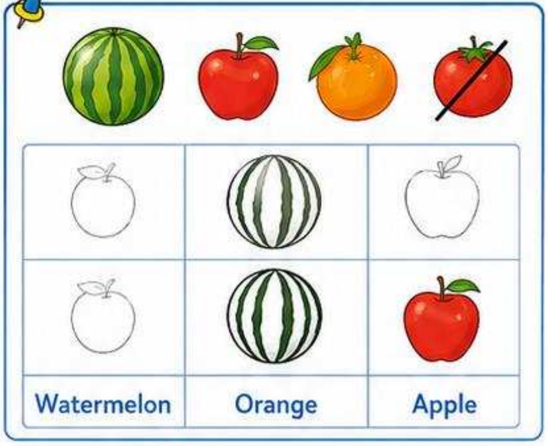
- Compare data using graphs and tables.
- Find similarities and differences.
- Draw conclusions and make decisions.

D.M.RAZK
موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Lesson 1 PICTOGRAPHS AND TABLES

Learn

LEARNING OBJECTIVE Organizing data using pictographs and tables.



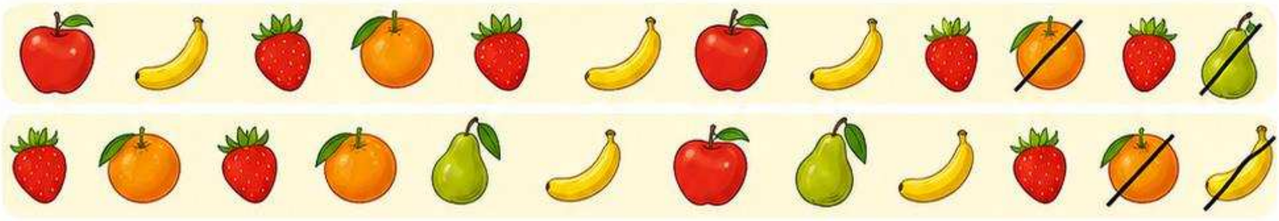
1 Arranging and organizing data:

1. Classify each item into one category. (Put a ✓ on each picture.)
2. Color one square for each picture from bottom to top.

2 From the pictograph, we can find:

1. The number of each type of fruit easily.
2. Which fruit is the most and which is the least.

Example Look at the pictures below, then answer.



3 Complete the pictograph for the data:

Fruit Numbers

	○	○	○	○
Watermelon	Orange	Guava	Peach	Apple

TIP
Count the pictures first, then mark one square for each.

4 Transfer the numbers from the pictograph to the table:

Fruit Numbers

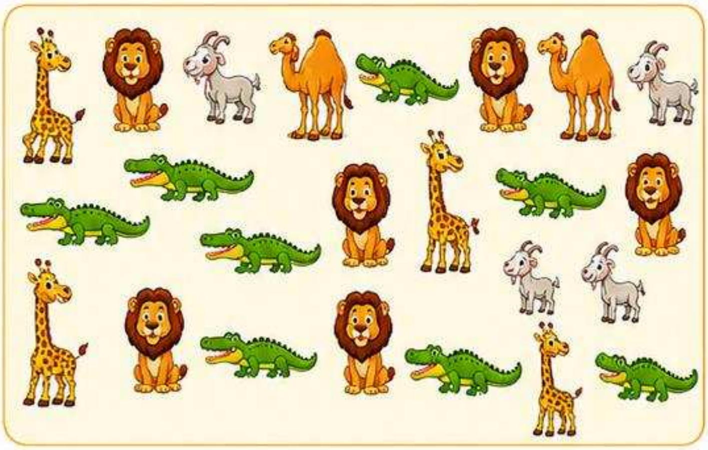
Fruit	Watermelon	Orange	Guava	Peach	Apple
Number	....	....	....	....	....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

1 Count the animals, then answer:

Animal Numbers

Giraffe	Lion	Crocodile	Camel	Goat



1. Write the name of the animal with the fewest, and show its number in the pictograph.
2. Transfer the numbers from the pictograph to the table.

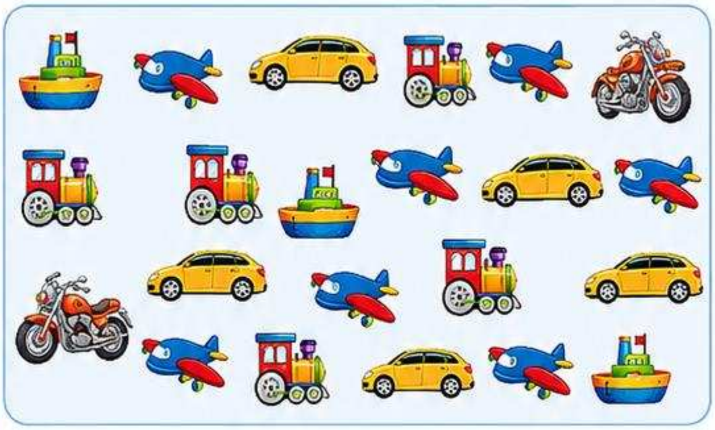
Animal Numbers

Animal	Giraffe	Lion	Crocodile	Camel	Goat
Number	....	....	....	....	....

2 Count the means of transport, then answer:

Means of Transport

Ship	Plane	Car	Train	Motorcycle



1. Write the name of the means of transport with the fewest, and show its number in the pictograph.
2. Transfer the numbers from the pictograph to the table.

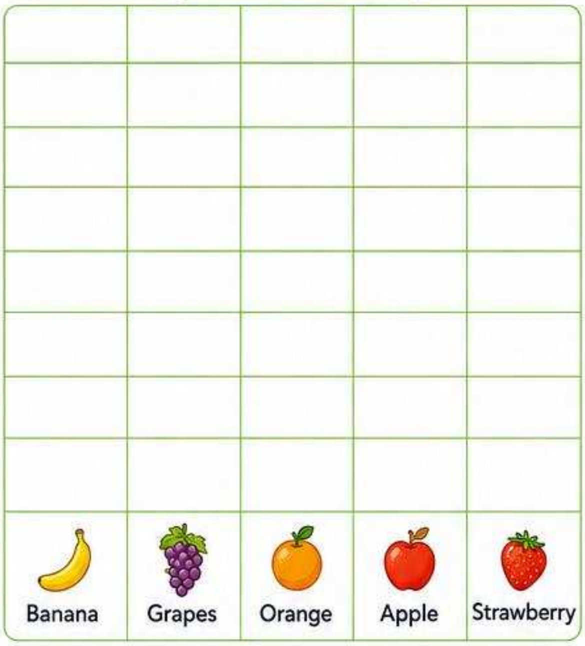
Means of Transport Numbers

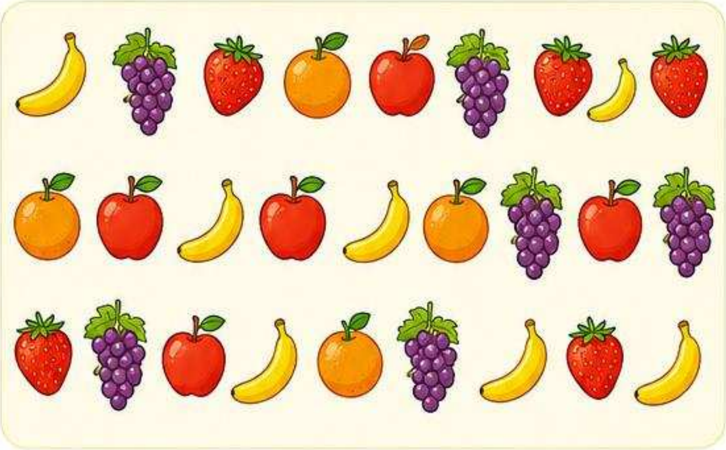
Means of Transport	Ship	Plane	Car	Train	Motorcycle
Number	....	....	....	....	....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

3 Count the fruits, then answer:

Fruit Numbers





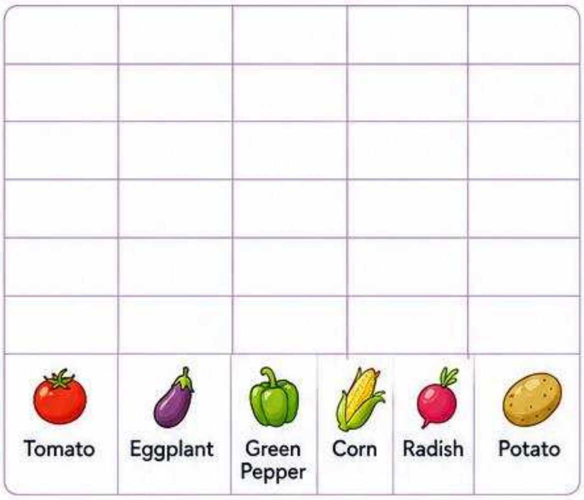
1. Write the name of the fruit with the fewest, and show its number in the pictograph.
2. Transfer the numbers from the pictograph to the table.

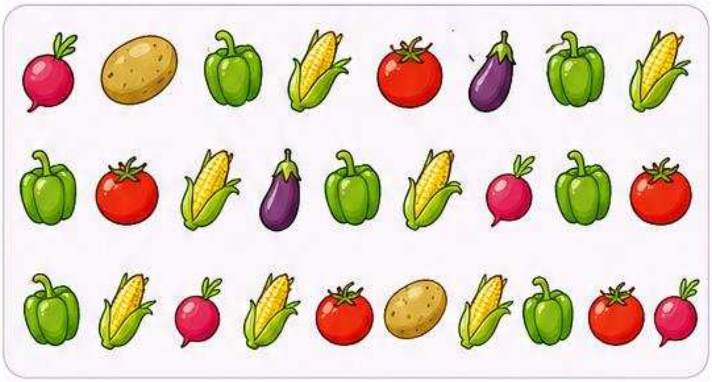
Fruit Numbers

Fruit	Banana	Grapes	Orange	Apple	Strawberry
Number	....	....	....	....	....

4 Count the vegetables, then answer:

Vegetable Numbers





1. Write the name of the vegetable with the fewest, and show its number in the pictograph.
2. Transfer the numbers from the pictograph to the table.

Vegetable Numbers

Vegetable	Tomato	Eggplant	Green Pepper	Corn	Radish	Potato
Number	....	....	....	....	....	....

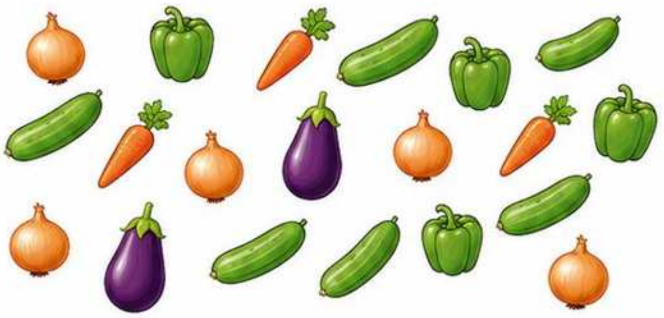
D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Homework

1 Here are some vegetables. Count them and complete the pictograph and the table.

Vegetable Pictograph

Bean	Eggplant	Carrot	Green Pepper	Onion



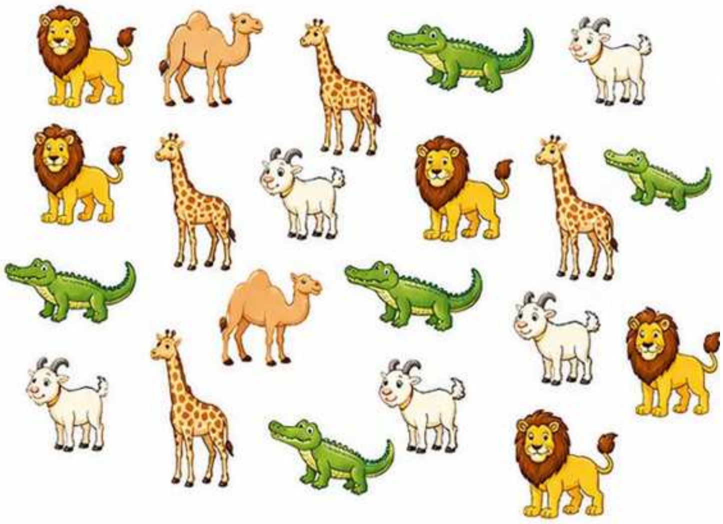
Vegetable Numbers

Bean	Eggplant	Carrot	Green Pepper	Type
				Number

2 Here are some animals. Count them and complete the pictograph and the table.

Animal Pictograph

Lion	Camel	Giraffe	Crocodile	Goat



Animal Numbers

Lion	Camel	Giraffe	Crocodile	Animal
				Number

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Lesson 2 READING PICTOGRAPHS AND TABLES

Learn

Reading data from pictographs and tables:

Pictographs and tables can be used in many ways.

Tables

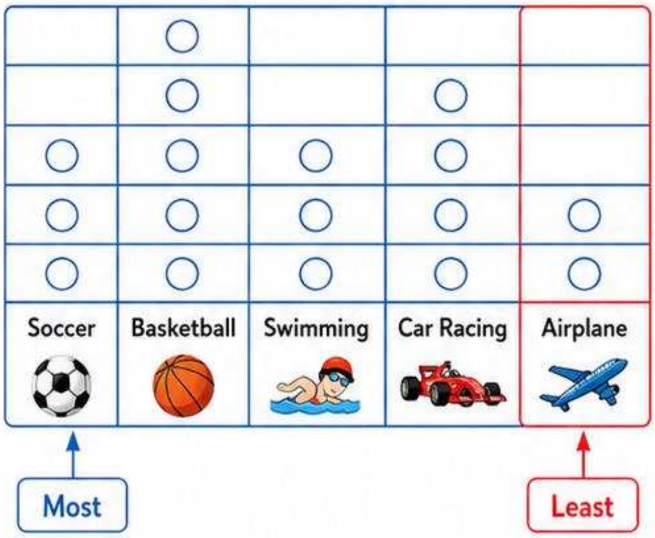
- Find the number of each item easily and from a different view.
- Find the total number quickly.

Pictographs

- Know the most, the least, and the numbers quickly.
- From a different point of view.

Example The teacher asked some children about their favorite game.
The results are shown in the pictograph and the tables below:

Favorite Games



From the pictograph, we can know:

- The game with the fewest number in the pictograph is Airplane.
  (The column with the least number of circles.)
- The game with the most number in the pictograph is Basketball.
  (The column with the most number of circles.)

Favorite Games

Game	Airplane	Car Racing	Swimming	Basketball	Soccer
Number	2	4	3	6	3

The second two games have the same number.

From the following table, we can know:

- The total number of children for cars and airplanes: $2 + 4 = 6$ games.
- The total number of children for basketball and soccer balls: $6 + 3 = 9$ games.
- The second two games have the same number of children: Swimming and Car Racing.
- The total number of children for all games: $2 + 4 + 3 + 6 + 3 = 18$ children.
- The game with the most children is Basketball. Number of children who prefer basketball: $6 - 2 = 4$ children.

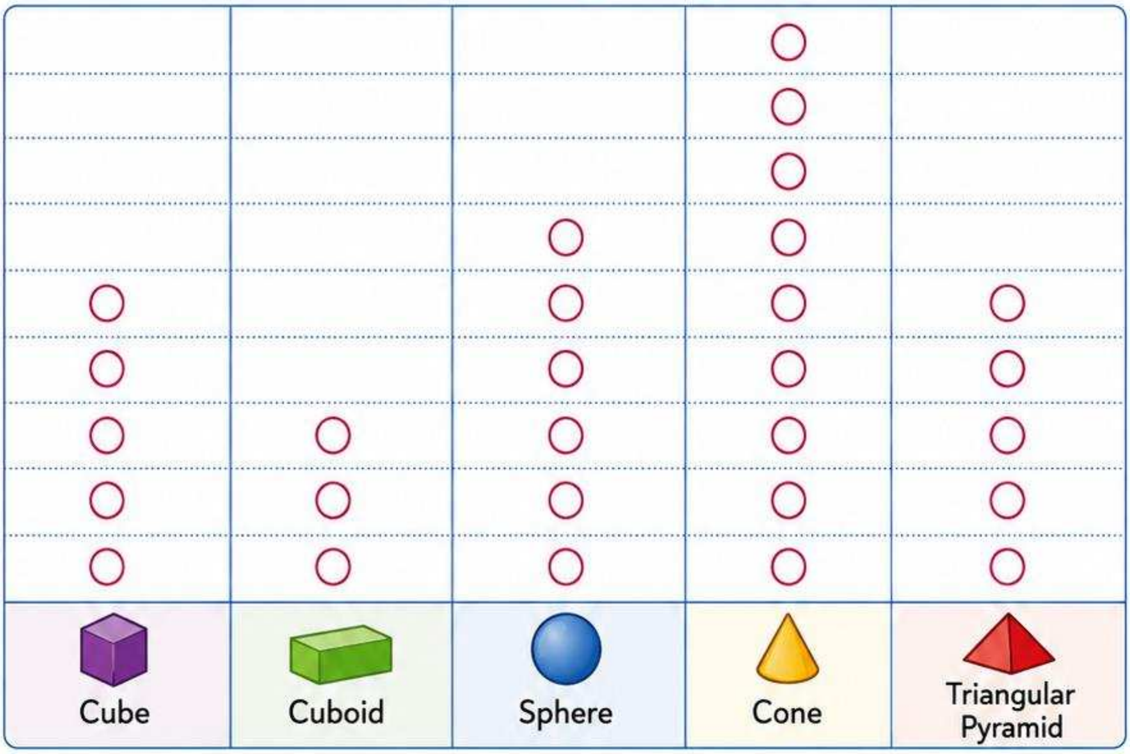
Note

- The word "more" means to know the difference.

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Solve ✔ Look at the engineering shapes below. Some second grade students were asked about their favorite shape.
The results are shown in the pictograph below:

Number of Favorite Engineering Shapes



1 Transfer the numbers from the pictograph to the table below:

Number of Favorite Engineering Shapes

Shape	Cube	Cuboid	Sphere	Cone	Triangular Pyramid
Number	....	....	....	....	....

2 Which engineering shape is the most favorite among the students? ....

3 Which engineering shape is the least favorite among the students? ....

4 Which group is larger, the students who prefer the cube or those who prefer the cuboid? ....

....

5 Which two shapes have the same number of students? ....

6 Which shape is easier to know which is the most and the least?
The pictograph or the table? Why? ....

....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

1 Look at the places that second grade students traveled to during their school trip. Then read the data and answer the questions.

Number of Students Who Visited Each Place

		○		
○		○	○	
○		○	○	
○		○	○	○
○		○	○	○
○	○	○	○	○
○	○	○	○	○
○	○	○	○	○
Farm	Aquarium	Desert Zoo	Fish Market	Emirates Palace

1. Transfer the numbers from the pictograph to the table below:

Number of Students Who Visited Each Place

Emirates Palace	Fish Market	Desert Zoo	Aquarium	Farm	Place
....	....	....	....	....	Number

2. Which place did the most students visit? ....
3. Which place did the least students visit? ....
4. Which group is larger, the students who visited the fish market or the students who visited the farm? ....
5. Which places have the same number of students? ....
6. Which is easier to know the numbers: the pictograph or the table? Why?

....

2 Look at the number of different school tools that some children have. Then read the data and answer the questions.

Number of School Tools

			○	
			○	
○			○	
○			○	
○	○		○	○
○	○	○	○	○
○	○	○	○	○
○	○	○	○	○
Pencil Case	Sharpener	Ruler	Eraser	Pen

1. Transfer the numbers from the pictograph to the table below:

Number of School Tools

Pen	Eraser	Ruler	Sharpener	Pencil Case	Tool
....	....	....	....	....	Number

2. Which tool do the most children have? ....
3. Which tool do the least children have? ....
4. Which tools have the same number of children?

....

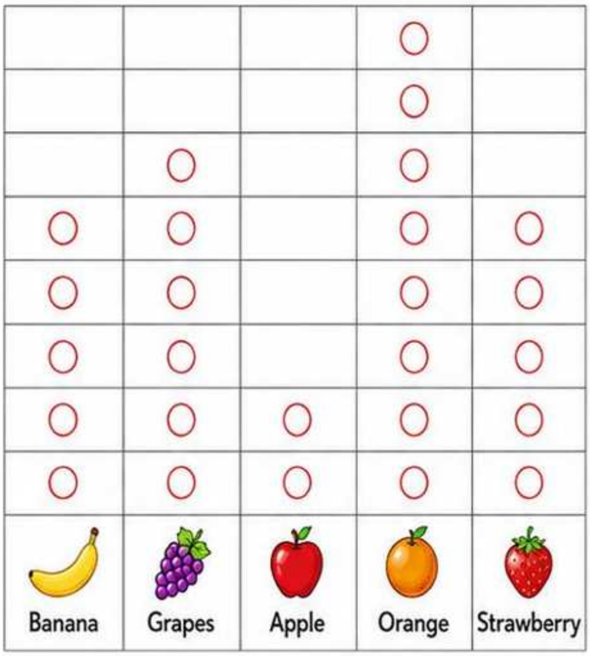
5. Which tool do more children have, the pen or the pencil case? ....
6. How many more children have erasers than rulers? ....
7. What is the total number of children who have rulers and pencil cases? ....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Homework

1 Look at the pictograph about favorite fruits. Read the data and answer the questions below.

Number of Favorite Fruits



1. Transfer the numbers from the pictograph to the table below:

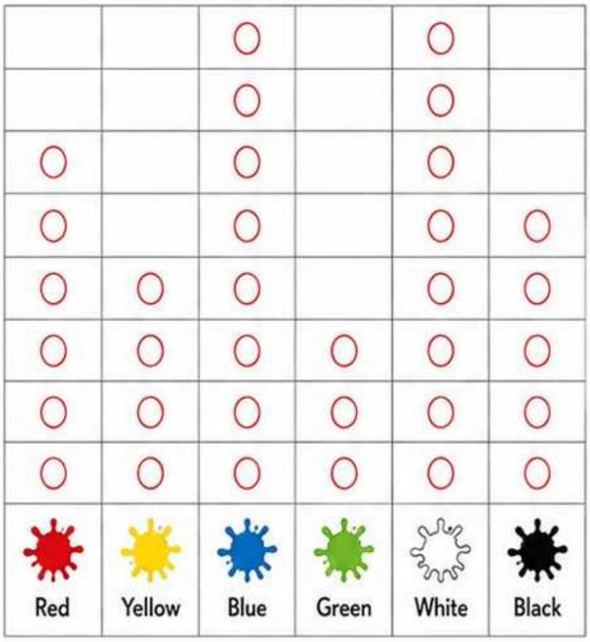
Number of Favorite Fruits

Fruit	Banana	Grapes	Apple	Orange	Strawberry
Number	....	....	....	....	....

2. Which fruit is the most favorite among the students? ....
3. Which fruit is the least favorite among the students? ....
4. Which group is larger, the students who like apples or the students who like strawberries? ....
5. Which two fruits have the same number of students? ....
6. Which is easier to know the most and the least: the pictograph or the table? Why? ....

2 Look at the pictograph about favorite colors. Read the data and answer the questions below.

Number of Favorite Colors



1. Transfer the numbers from the pictograph to the table below:

Number of Favorite Colors

Color	Red	Yellow	Blue	Green	White	Black
Number	....	....	....	....	....	....

2. Which color is most favorite among the students? ....
3. Which color is least favorite among the students? ....
4. Which color has more students: blue or black? ....
5. Which two colors have the same number of students? ....
6. Which color do more students prefer: white or yellow? ....
7. What is the total number of students who like red and black?

....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

3 Display the following data about fruits. Observe the pictures, then answer.

First: Write the name of the fruit with the fewest, then write how many of each type in the pictograph.

Fruit Pictograph

Banana	Grapes	Orange	Apple

Second: Use the previous pictograph to complete the table below:

Fruit Numbers

Banana	Grapes	Orange	Apple	Fruit
				Number

Third: Answer the following:

_______ (1) Which fruit is the most in number?

_______ (2) Which fruit is the least in number?

_______ (3) How many fruits are equal to 6?

_______ (4) Which fruit has more than 6?

_______ (5) Which fruits have the same number?

_______ (6) What is the total number of grapes and strawberries? (Number of grapes + number of strawberries)

_______ (7) How many more bananas than oranges? (Number of bananas – number of oranges)

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

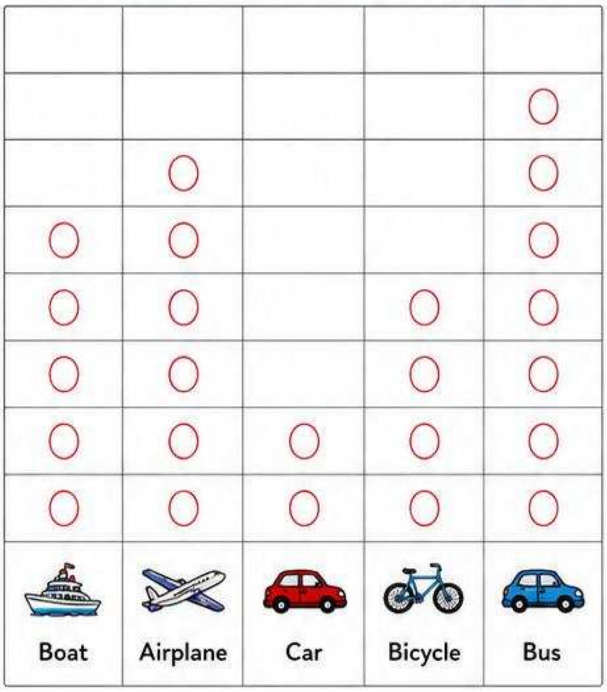
Think and Do Your Best!

Up to Lesson 2

Test Yourself

1 Look at the pictograph below, then choose the correct answers.

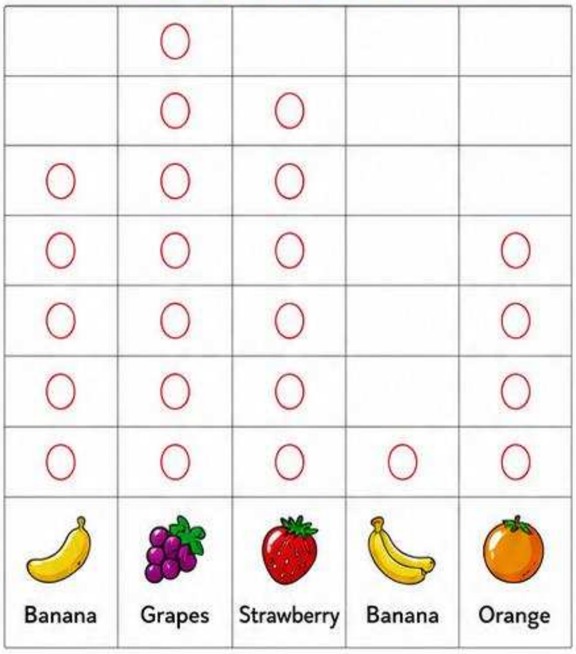
Number of Favorite Means of Transport



1. How many children prefer the car?
   .... children
   (1 , 2 , 3 , 4)
2. How many children prefer the airplane?
   .... children
   (3 , 4 , 5 , 6)
3. Which means of transport do the most children prefer?
   (boat , airplane , car , bicycle , bus)
4. What is the total number of children who prefer the car and the bus together?
   .... children
   (8 , 9 , 10 , 11)
5. How many more children prefer the boat than the airplane?
   .... children
   (3 , 4 , 5 , 6)

2 Look at the pictograph below, then answer the questions.

Number of Favorite Fruits



1. Transfer the numbers from the pictograph to the table below.

Number of Favorite Fruits

Fruit	Banana	Grapes	Strawberry	Banana	Orange
Number	.....	.....	.....	.....	.....

2. Which fruit do the most children prefer?
   ....
3. Which fruit do the least children prefer?
   ....
4. Which group is larger, the students who like bananas or the students who like strawberries?
   ....
5. Which two fruits have the same number of students?
   ....
6. How many more children like grapes than oranges?
   ....
7. What is the total number of children who like bananas and oranges?
   ....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Remember Comparing Pictographs 3 Lesson

Learn Comparing data in two pictographs:

- Organizing and ordering elements using pictographs helps us compare results and notice the differences easily.
- Let's look at the number of boys and girls in the first term and the second term, then display the results in the following two pictographs:

Number of Boys and Girls in the First Term

	○
	○
	○
○	○
○	○
○	○
Boys	**Girls**

Number of Boys and Girls in the Second Term

○	
○	
○	
○	○
○	○
○	○
Boys	**Girls**

From the pictographs, we can conclude that:

- **In the first term:**
  The number of boys is less than the number of girls by 3 students.
  6 − 3 = 3 students
- **In the second term:**
  The number of boys is more than the number of girls by 3 students.
  5 − 3 = 2 students
- **The total number of boys in the two terms together:**
  3 + 5 = 8 boys
- **The difference between the number of girls in the first term and the second term:**
  6 − 3 = 3 girls
- **The number of boys in the first term equals the number of girls in the second term.**

○ means 1 student | Example: 3 ○ = 3 students

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

1 Solve We want to compare the preferred subject of students in two terms.
We use pictographs, show the results in the graphs below, then answer the questions.

Number of Preferred Subjects (Term 1)

			○	
			○	○
		○	○	○
○		○	○	○
○		○	○	○
○	○	○	○	○
Arabic	Math	Religion	English	Art

○ means 1 student

Number of Preferred Subjects (Term 2)

	○			○
	○			○
○	○		○	○
○	○	○	○	○
○	○	○	○	○
○	○	○	○	○
Arabic	Math	Religion	English	Art

○ means 1 student

1. Which subject is preferred by the largest number of students in term (1)? ....
2. Which subject is preferred by the smallest number of students in term (2)? ....
3. Which subject is preferred by the same number of students in term (1) and term (2)? ....
4. Which subject has the greatest total number of students in the two terms? ....
5. What is the difference between the number of students who prefer Math in term (1) and in term (2)? Which number is greater? ....

---

2 Solve Look at the following pictographs, then choose the correct answers.

Number of Preferred Colors (Term 1)

				○
○				○
○		○		○
○		○	○	○
○	○	○	○	○
Red	Blue	Green	Yellow	White

○ means 1 student

Number of Preferred Colors (Term 2)

○				○
○		○		○
○		○	○	○
○	○	○	○	○
Red	Blue	Green	Yellow	White

○ means 1 student

1. Which color is preferred by the largest number of students in term (1)?
   A Red B Blue C White D Green E Yellow
2. Which color is preferred by the smallest number of students in term (2)?
   A Blue B Yellow C Green D Red E White
3. (a) Which color has the greatest total number of students in the two terms?
   A Red B Blue C Green D White E Yellow
   (b) Which color has the smallest total number of students in the two terms?
   A Blue B Yellow C Green D Red E White

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Homework

1 Look at the pictographs in (1) and (2) about the favorite animals that students like.
We organized and presented the results in the graphs below.
Look at the graphs, then answer the questions.

(2) Number of Favorite Animals (Term 2)

○				○
○				○
○				○
○	○			○
○	○	○	○	○
○	○	○	○	○
○	○	○	○	○
○	○	○	○	○
Lion	Zebra	Rabbit	Cat	Dog

○ = 1 student

(1) Number of Favorite Animals (Term 1)

			○	
			○	
○			○	
○			○	
○		○	○	
○	○	○	○	
○	○	○	○	○
○	○	○	○	○
Lion	Zebra	Rabbit	Cat	Dog

○ = 1 student

1. Which animal is preferred by the largest number of students in term (1)? ....
2. Which animal is preferred by the smallest number of students in term (2)? ....
3. Which animal is preferred by the same number of students in both term (1) and term (2)? ....
4. Which animal has the greatest total number of students in the two terms together? ....
5. What is the difference between the number of students who prefer the animal in term (1) and the number in term (2) for the animal that is preferred by the largest number in term (2)? ....

2 We surveyed groups of students about their favorite sports.
Look at the graphs below, then answer the questions.

(2) Number of Favorite Sports (Group 2)

		○		○
		○		○
○		○	○	○
○		○	○	○
○	○	○	○	○
Soccer	Basketball	Tennis	Volleyball	Swimming

○ = 1 student

(1) Number of Favorite Sports (Group 1)

				○
		○		○
		○		○
○		○	○	○
○	○	○	○	○
Soccer	Basketball	Tennis	Volleyball	Swimming

○ = 1 student

1. Which sport is preferred by the largest number of students in group (1)? ....
2. Which sport is preferred by the smallest number of students in group (2)? ....
3. Which sport is preferred by the same number of students in both group (1) and group (2)? ....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

TEST ON CHAPTER 1

Graphs and Pictographs

Name: ________________ Class: __________ Date: __________ Score: _____ / 20

1 Look at the pictograph and complete the questions.

Number of Favorite Fruits

	○			
	○			
○	○			○
○	○	○		○
○	○	○	○	○
○	○	○	○	○
Guava	Grapes	Peach	Strawberry	Watermelon

○ = 1 child

1. How many children like peaches?
   1 2 3 4
2. Which fruit is liked by the greatest number of children?
   Guava Grapes Peach Strawberry Watermelon
3. Which fruit is liked by the fewest number of children?
   Guava Grapes Peach Strawberry Watermelon
4. How many children like grapes and watermelon together?
   __________ children
5. Which two fruits are liked by the same number of children?
   ____

2 Look at the pictograph and complete the questions.

Number of Sea Animals

			○
○			○
○	○		○
○	○	○	○
○	○	○	○
Starfish	Sea Turtle	Octopus	Whale

○ = 1 animal

1. Which sea animal appears most often?
   ____
2. Which sea animal appears least often?
   ____
3. How many sea turtles and whales are there altogether?
   ____
4. Which two sea animals have the same number?
   ____
5. How many more whales are there than octopuses?
   ____

3 From the given data, complete the pictograph and answer the questions.

Number of Favorite Foods

Pizza	Burger	Pasta	Salad

Data

Food	Pizza	Burger	Pasta	Salad
Number of Children	5	3	4	2

○ = 1 child

1. Which food is liked by the most children?
   ____
2. Which food is liked by the least children?
   ____
3. How many children like pizza and pasta together?
   ____
4. How many children like burger or salad?
   ____

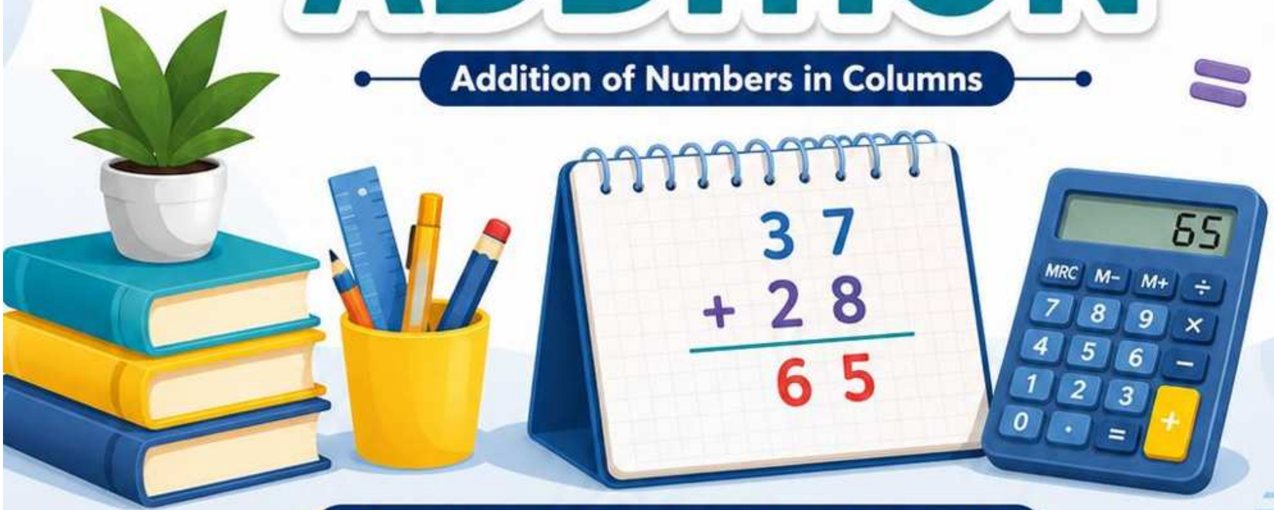
Good luck! ☆

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

CHAPTER 2

VERTICAL ADDITION

Addition of Numbers in Columns



LEARNING OBJECTIVES

Lesson 1 (Part 1)

Vertical Addition
- Add two 2-digit numbers using base-ten blocks and a place value chart.
- Add a 2-digit number and a 1-digit number using models and a place value chart.
- Solve real-life word problems involving addition.

Lesson 2 (Part 2)

Vertical Addition
- Add two 2-digit numbers using the column addition method.
- Solve addition word problems.

Lesson 3 (Part 3)

$$\begin{array}{r} 42 \\ +\ 37 \\ \hline 79 \end{array}$$

Vertical Addition
- Add numbers with or without regrouping using the column method.
- Solve real-life word problems.

Lesson 4 (Part 4)

Vertical Addition
- Add numbers with more than one regrouping.
- Solve multi-step word problems.

Lesson 5 (Part 5)

Vertical Addition
- Review and practice addition using the column method.
- Solve real-life problems and challenges.

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

LESSONS 1 & 2

VERTICAL ADDITION

LESSON 1 Vertical Addition (Part 1)

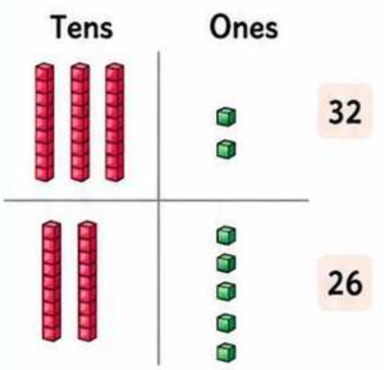
LESSON 2 Vertical Addition (Part 2)

1 Learn Add each of the following two numbers:

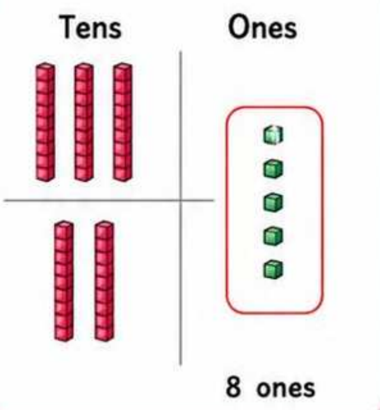
First Add using the model:

Example We can find the sum of 32 + 26 using the model as follows:

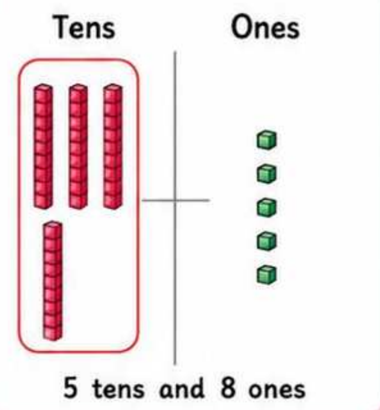
1 Represent each number using tens rods and ones cubes.



2 Add the ones first: 2 ones + 6 ones = 8 ones



3 Add the tens: 3 tens + 2 tens = 5 tens



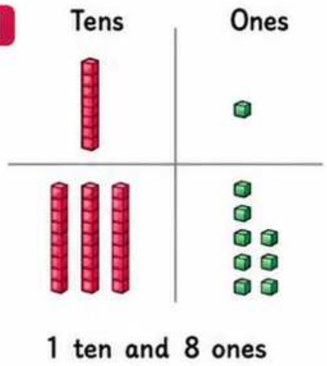
Therefore: 32 + 26 = 58

Example 1 Find the sum of each of the following using the model:

1. 13 + 21
2. 24 + 41
3. 11 + 37

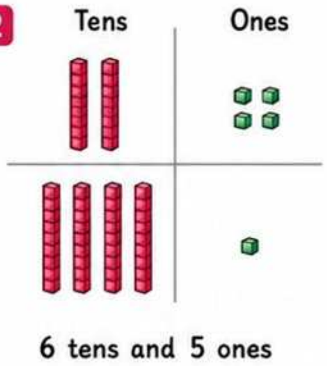
Solution Method

1



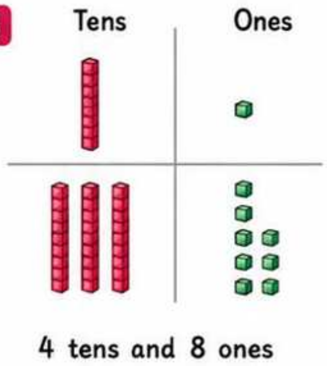
13 + 21 = 34

2



24 + 41 = 65

3



11 + 37 = 48

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

TRY 1 ⭐ Find the sum of each of the following using place value models.

1. 12 + 11 = ________

Tens	Ones

2. 14 + 23 = ________

Tens	Ones

3. 27 + 12 = ________

Tens	Ones

Using the Place Value Chart (Vertical Addition Method)

We can find the sum of **46 + 21** by using the place value chart.

Step 1

Write the numbers vertically, lining up the digits according to their place values.

Tens	Ones
4	6
2	1

Step 2

Add the ones digits.

6 + 1 = 7

Tens	Ones
4	6
2	1
6	7

Step 3

Add the tens digits.

4 + 2 = 6

Tens	Ones
4	6
2	1
6	7

✔ Therefore: **46 + 21 = 67**

Solve Another Way

Solve using the horizontal method.

46 + 21 = ____________

EXAMPLE 2 ⭐ Find the sum of each of the following using the vertical addition method.

1. 14 + 33 = ________
2. 42 + 43 = ________
3. 28 + 50 = ________

SOLUTION

1.

Tens	Ones
1	4
3	3
4	7

14 + 33 = 47

2.

Tens	Ones
4	2
4	3
8	5

42 + 43 = 85

3.

Tens	Ones
2	8
5	0
7	8

28 + 50 = 78

TRY 2 Find the sum of each of the following.

1. 37 + 22 = ________
2. 62 + 31 = ________
3. 54 + 30 = ________

⭐ Line up the digits correctly. Add ones first, then tens. ⭐

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

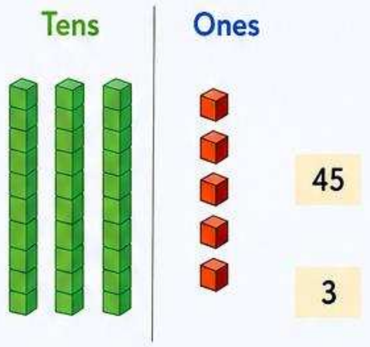
Learn 2 Adding Two Numbers (One-Digit and Two-Digit Numbers)

When adding a one-digit number and a two-digit number, write the two-digit number below the one-digit number, then add the tens digits and the ones digits as shown.

Example: We can find the sum of 45 + 3 using two methods: 45 + 3 = 48

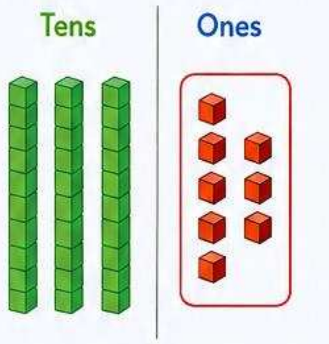
Using Models

1. Represent each number using base-ten blocks.

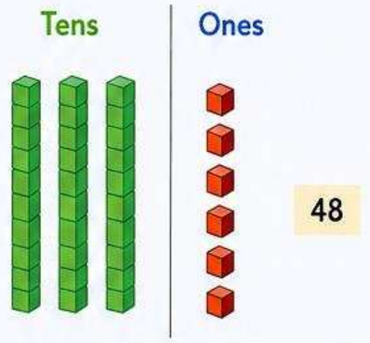


2. Add the ones.

3 ones + 5 ones = 8 ones



3. The tens remain the same.



Using the Place Value Chart (Vertical Addition Method)

1. Write the numbers vertically, lining up the digits according to their place values.

Tens	Ones	
4	5	
0	3	+

2. Add the ones digits.

5 + 3 = 8

Tens	Ones	
4	5	
0	3	+
	8	

3. Add the tens digits.

4 + 0 = 4

Tens	Ones	
4	5	
0	3	+
4	8	

Therefore: 45 + 3 = 48

Try Another Way

Solve using the horizontal method.

45 + 3 = ______________

Common Mistakes

When adding, write the two-digit number below the one-digit number, and not in the tens place.

Example: When adding 47 + 2 you must do it as follows:

Wrong

The one-digit number was written in the tens place by mistake.

Tens	Ones	
4	7	
2		+

Correct

The one-digit number was written in the ones place.

Tens	Ones	
4	7	
	2	+

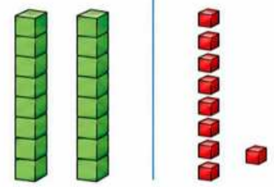
D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Example 3 Find the sum of each of the following using base-ten blocks (models):

1. 28 + 1
2. 30 + 4
3. 7 + 22

Solution

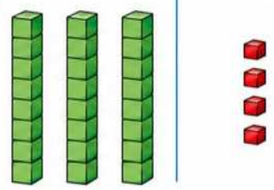
1



2 tens and 9 ones

28 + 1 = 29

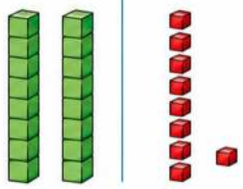
2



3 tens and 4 ones

30 + 4 = 34

3



2 tens and 9 ones

7 + 22 = 29

(rod) = one ten (10) (cube) = one one (1)

Example 4 Find the sum of each of the following using the vertical addition method.

3. 8 + 60
2. 4 + 35
1. 16 + 3

Solution

3

Tens	Ones
0	8
6	0 +
6	8

68 = 8 + 60

2

Tens	Ones
0	4
3	5 +
3	9

39 = 4 + 35

1

Tens	Ones
1	6
0	3 +
1	9

19 = 16 + 3

Try it Yourself 3 Find the sum of each of the following using the vertical method.

3. 6 + 20

Tens	Ones
....	....
....	.... +
....	....

2. 62 + 7

Tens	Ones
....	....
....	.... +
....	....

1. 35 + 4

Tens	Ones
....	....
....	.... +
....	....

6. 51 + 8

Tens	Ones
....	....
....	.... +
....	....

5. 2 + 45

Tens	Ones
....	....
....	.... +
....	....

4. 7 + 32

Tens	Ones
....	....
....	.... +
....	....

Remember: Add the ones first, then add the tens.

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Learn 3 ☆ Solving Word Problems on Addition

Example 5 Read the problem carefully and write the operation and the answer:

- Hossam has 25 pencils and his brother has 24 pencils.
  What is the total number of pencils with Hossam?

Solution

To find the total number of pencils, we use the addition operation.

☆ The operation: 25 + 24 = 49

We must write the answer in a complete sentence. → ☆ The answer: 49 pencils

Tens	Ones	
2	5	
2	4	+
4	9	

Keywords ! The words that indicate the addition operation are:

The total | The whole | The sum

Example 6 Read the problem carefully and write the operation and the answer:

- Hana has 31 pieces of candy and with her sister she has 7 more.
  What is the total number of pieces of candy they have together?

Solution

To find the total number of pieces of candy, we use the addition operation.

☆ The operation: 31 + 7 = 38

We must write the answer in a complete sentence. → ☆ The answer: 38 pieces of candy

Tens	Ones	
3	1	
	7	+
3	8	

Try it 4 Read the problem carefully and write the operation and the answer:

- Ahmed has 13 books and with his friend he has 15 books.
  What is the total number of books with Ahmed and his friend?

☆ The operation: ....

☆ The answer: ....

Remember: Add the ones first, then add the tens.

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Homework

1 Find the sum using the place value table:

(1) 35 + 12 = ____

Tens	Ones

(2) 15 + 24 = ____

Tens	Ones

(3) 61 + 17 = ____

Tens	Ones

(4) 39 + 20 = ____

Tens	Ones

(5) 22 + 75 = ____

Tens	Ones

(6) 18 + 81 = ____

Tens	Ones

2 Find the sum of each of the following:

(1)

	Tens	Ones
	3	6
+	2	3

(2)

	Tens	Ones
	1	6
+	2	1

(3)

	Tens	Ones
	5	3
+	3	3

(4)

	Tens	Ones
	4	1
+	2	8

(5)

	Tens	Ones
	2	7
+	2	0

(6)

	Tens	Ones
	8	0
+	1	5

(7)

	Tens	Ones
	3	0
+	4	0

(8)

	Tens	Ones
	4	9
+	5	0

(9)

	Tens	Ones
	7	2
+	2	4

(10)

	Tens	Ones
	5	0
+	4	5

(11)

	Tens	Ones
	2	7
+	4	2

(12)

	Tens	Ones
	2	9
+	3	4

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

3 Find the sum using the vertical method:

① 15 + 14 =

Tens	Ones	
....	....	
....	....	+
....	....	

② 43 + 26 =

Tens	Ones	
....	....	
....	....	+
....	....	

③ 50 + 38 =

Tens	Ones	
....	....	
....	....	+
....	....	

④ 64 + 25 =

Tens	Ones	
....	....	
....	....	+
....	....	

⑤ 36 + 43 =

Tens	Ones	
....	....	
....	....	+
....	....	

⑥ 12 + 83 =

Tens	Ones	
....	....	
....	....	+
....	....	

⑦ 52 + 17 =

Tens	Ones	
....	....	
....	....	+
....	....	

⑧ 53 + 16 =

Tens	Ones	
....	....	
....	....	+
....	....	

⑨ 19 + 80 =

Tens	Ones	
....	....	
....	....	+
....	....	

4 Add as in the example:

Example: 38 = 15 + 23

① 47 + 40 = ...
② 16 + 21 = ...
③ 24 + 15 = ...
④ 11 + 34 = ...
⑤ 33 + 66 = ...
⑥ 42 + 14 = ...
⑦ 26 + 23 = ...
⑧ 40 + 55 = ...
⑨ 17 + 82 = ...
⑩ 62 + 27 = ...
⑪ 14 + 70 = ...

5 Add, then find the equal results:

① 32 + 26 = ...

30 + 33 = ...

☆

② 42 + 21 = ...

46 + 12 = ...

☆

③ 11 + 84 = ...

50 + 45 = ...

☆

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Solve the following word problems:

Read, then write the addition operation and the answer.

1. Omar has 43 pieces of candy, then he got 26 more pieces.
What is the total number of candy pieces now?
★ Operation: --
★ Answer: --

2. Malek has 27 pounds and his dad gave him 12 pounds.
What is the total amount of money Malek has?
★ Operation: --
★ Answer: --

3. Mariam has 50 stickers and her sister has 45 stickers.
What is the total number of stickers they have?
★ Operation: --
★ Answer: --

4. Hind has 25 balloons and her friend has 34 balloons.
What is the total number of balloons they have together?
★ Operation: --
★ Answer: --

5. In the playground, 24 boys were playing, then 5 girls joined them.
What is the total number of children now?
★ Operation: --
★ Answer: --

6. On the tree, there are 8 yellow birds and 10 other birds.
What is the total number of birds on the tree now?
★ Operation: --
★ Answer: --

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Lesson 2

Up to the Lesson **Test Yourself**

1 Choose the correct answer:

1. 22 + 36 = (85 , 58 , 48 , 46)
2. 4 + 45 = (58 , 94 , 49 , 85)
3. 75 + 5 = (75 , 27 , 77 , 87)
4. 68 = 8 + (66 , 86 , 6 , 60)
5. With one bag I have 3 marbles and with another bag 12 marbles.
   What is the total number of marbles?
   (16 , 15 , 14 , 13)

2 Find the sum of each of the following:

(1)
$$\begin{array}{r} 25 \\ +\ 35 \\ \hline \ldots\ldots \end{array}$$

(2)
$$\begin{array}{r} 85 \\ +\ 34 \\ \hline \ldots\ldots \end{array}$$

(3)
$$\begin{array}{r} 50 \\ +\ 29 \\ \hline \ldots\ldots \end{array}$$

(4)
$$\begin{array}{r} 46 \\ +\ 32 \\ \hline \ldots\ldots \end{array}$$

(5)
$$\begin{array}{r} 95 \\ +\ 45 \\ \hline \ldots\ldots \end{array}$$

(6)
$$\begin{array}{r} 38 \\ +\ 11 \\ \hline \ldots\ldots \end{array}$$

(7)
$$\begin{array}{r} 50 \\ +\ 23 \\ \hline \ldots\ldots \end{array}$$

(8)
$$\begin{array}{r} 90 \\ +\ 60 \\ \hline \ldots\ldots \end{array}$$

3 Look at the pictograph, then answer:

	○	○			
	○				
	○	○			○
	○	○		○	○
○	○		○	○	○
Car	Boat	Ball	Plane		Bike

1. Which game do the most children like? ....
2. How many children like the boat? ....
3. What is the total number of children who like ball and bike? ....
4. How many children like the plane more than the bike? ....

4 Read, then write the mathematical operation and the answer:

There were 26 boys in the park, then 3 other boys came.
What is the total number of boys in the park?

☆ The mathematical operation: ....

☆ The answer: ....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

3&4 • Add Two Numbers (Part 3) • Add Two Numbers (Part 4)

Lesson

Learn Add two numbers made up of two digits by regrouping.

Case 1: When the sum of the ones digits is greater than 10

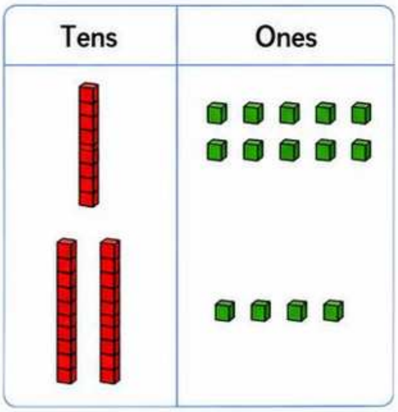
Example Add 18 + 25 using two different methods:

First: Using the model:

1 Represent each number using base–ten blocks.

18 = 1 ten + 8 ones

25 = 2 tens + 5 ones

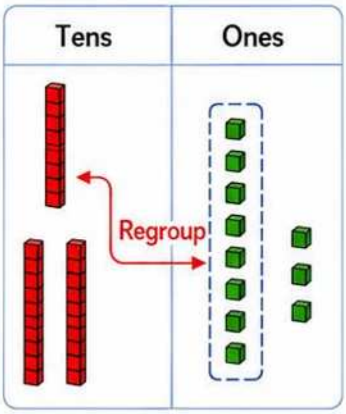


3 tens and 13 ones

2 Add the ones digits.

8 ones + 5 ones = 13 ones.

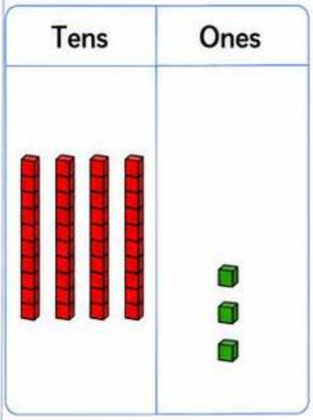
Regroup 10 ones into 1 ten.



3 Now add each place value separately.

Tens: 1 ten + 2 tens + 1 ten = 4 tens

Ones: 3 ones



$$\begin{array}{r} 18 \\ +25 \\ \hline 43 \end{array}$$

Therefore, 18 + 25 = 43 ☆

Second: Using the column (vertical) method:

1 Write the numbers one under the other according to their place values. (Ones under ones, tens under tens)

Tens	Ones	
1	8	
2	5	+
....	....	

2 Add the ones digits.

8 + 5 = 13

Write 3 in the ones place and carry 1 up to the tens place.

Tens	Ones	
1	8	
2	5	+
1	3	

3 Add the tens digits including the carried 1.

1 + 2 + 1 = 4

Tens	Ones	
1	8	
2	5	+
4	3	

Therefore, 18 + 25 = 43 ☆

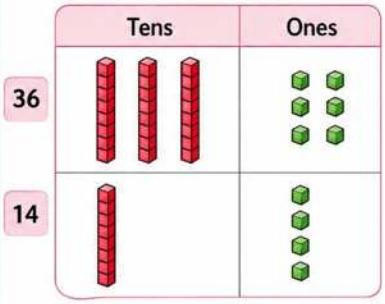
D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Example — We can add 36 + 14 in two ways:

First: Using the place value model (base-ten blocks)

1 Represent each number using tens rods and ones cubes.

36 = 3 tens + 6 ones
14 = 1 ten + 4 ones

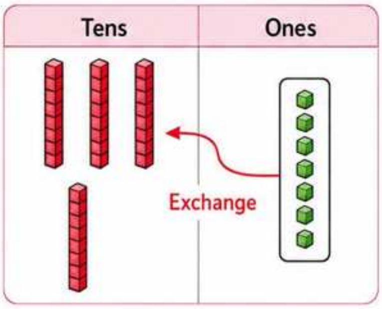


36 = 3 tens and 6 ones
14 = 1 ten and 4 ones

2 Add the ones first.

6 ones + 4 ones = 10 ones

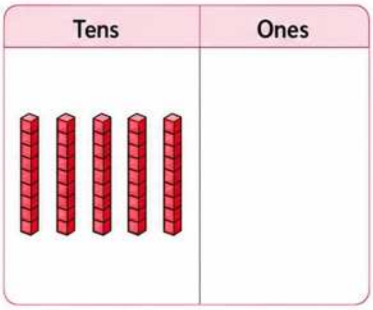
Exchange 10 ones for 1 ten.



10 ones = 1 ten

3 Add the tens.

3 tens + 1 ten + 1 exchanged ten
= 5 tens



5 tens and 0 ones

So, 36 + 14 = 50

Second: Using the place value method (column method):

1 Write the numbers one under the other according to their place values.

Tens	Ones	
3	6	
1	4	+
....	....	

2 Add the ones.

6 + 4 = 10

Write 0 in the ones place and carry 1 to the tens place.

Tens	Ones	
3 (carried 1)	6	
1	4	+
4	0	

3 Add the tens including the carried 1.

3 + 1 + 1 = 5

Tens	Ones	
3	6	
1	4	+
5	0	

So, 36 + 14 = 50

Note

10 ones = 1 ten

When the total number of ones is greater than 9, we exchange 10 ones for 1 ten.

Ten ones make one ten.

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Homework

1 Find the sum of each of the following using base-ten models:

1) 35 + 12 = ...

Tens	Ones

2) 15 + 24 = ...

Tens	Ones

3) 61 + 17 = ...

Tens	Ones

4) 20 + 39 = ...

Tens	Ones

5) 22 + 75 = ...

Tens	Ones

6) 18 + 81 = ...

Tens	Ones

2 Find the sum of each of the following:

1)

3	6	
2	3	+
....	....	

2)

1	6	
2	1	+
....	....	

3)

5	3	
3	3	+
....	....	

4)

4	1	
2	8	+
....	....	

5)

2	7	
2	0	+
....	....	

6)

8	0	
1	5	+
....	....	

7)

3	0	
4	0	+
....	....	

8)

4	9	
5	0	+
....	....	

9)

7	2	
2	4	+
....	....	

10)

2	5	
5	4	+
....	....	

11)

2	7	
4	2	+
....	....	

12)

2	9	
3	0	+
....	....	

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

3 Find the sum of each using the vertical (column) method.

(1) 14 + 27

Tens	Ones
....	....
....	.... +
....	....

(2) 23 + 38

Tens	Ones
....	....
....	.... +
....	....

(3) 29 + 45

Tens	Ones
....	....
....	.... +
....	....

(4) 27 + 64

Tens	Ones
....	....
....	.... +
....	....

(5) 16 + 78

Tens	Ones
....	....
....	.... +
....	....

(6) 8 + 45

Tens	Ones
....	....
....	.... +
....	....

(7) 7 + 66

Tens	Ones
....	....
....	.... +
....	....

(8) 36 + 28

Tens	Ones
....	....
....	.... +
....	....

(9) 15 + 7

Tens	Ones
....	....
....	.... +
....	....

(10) 15 + 35

Tens	Ones
....	....
....	.... +
....	....

(11) 17 + 23

Tens	Ones
....	....
....	.... +
....	....

(12) 14 + 56

Tens	Ones
....	....
....	.... +
....	....

(13) 6 + 34

Tens	Ones
....	....
....	.... +
....	....

(14) 5 + 85

Tens	Ones
....	....
....	.... +
....	....

(15) 3 + 57

Tens	Ones
....	....
....	.... +
....	....

(16) 71 + 9

Tens	Ones
....	....
....	.... +
....	....

(17) 23 + 7

Tens	Ones
....	....
....	.... +
....	....

(18) 9 + 81

Tens	Ones
....	....
....	.... +
....	....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

4 Add as in the example:

1. 35 + 48 = ...
2. 28 + 53 = ...
3. 43 + 49 📖 = ...
4. 16 + 67 = ...
5. 16 + 28 = ...
6. 8 + 78 📖 = ...
7. 9 + 89 = ...
8. 29 + 61 = ...
9. 69 + 4 📖 = ...
10. 65 + 7 📖 = ...
11. 53 + 7 = ...
12. 65 + 25 = ...
13. 7 + 43 = ...
14. 65 + 7 = ...
15. 52 + 28 📖 = ...
16. 1 + 19 = ...
17. 26 + 4 = ...
18. 39 + 45 = ...

5 Find the sum. Then circle the greatest result in each group:

(1) 49 + 38	(2) 39 + 45	(3) 26 + 66	(4) 27 + 34 ....
(5) 73 + 18	(6) 26 + 57	(7) 35 + 6	(8) 9 + 33 ....

6 Find the sum. Then circle the smallest result in each group:

(1) 66 + 24	(2) 38 + 12	(3) 35 + 25	(4) 49 + 21 ....
(5) 26 + 14	(6) 37 + 13	(7) 73 + 17	(8) 61 + 9 ....

7 Read, then write the addition operation and the answer.

(1) There are 29 boys in grade 4, and 23 girls.
What is the total number of students?

Operation: .... ☆
Answer: .... ☆

(2) Hind has 59 candies, and she ate 15.
How many candies are left with her?

Operation: .... ☆
Answer: .... ☆

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Test Yourself

Up to Lesson 4

Put your score here

1 Choose the correct answer:

١ 48 + 15 = (63 , 35 , 53 , 58)

٢ 49 + 11 = (80 , 70 , 60 , 50)

٣ 5 + 28 = (53 , 23 , 25 , 33)

٤ 2 + 17 = (15 , 20 , 37 , 40)

٥ With Ahmed 22 balls and with his brother 17 balls.
What is the total number of balls together?
(39 , 31 , 27 , 24)

2 Add:

١ 22 + 15 = ...	٤ 74 + 20 = ...	٧ 52 + 15 = ...
٢ 49 + 12 = ...	٥ 78 + 16 = ...	٨ 29 + 51 = ...
٣ 27 + 13 = ...	٦ 74 + 6 = ...	٩ 75 + 0 = ...

3 Discover the number of butterflies, then complete:

Favorite colors				
Red	Orange	Blue	Green	Yellow

١ Represent the number of butterflies in the picture.

٢ Translate the numbers from the pictograph to the table below.

Favorite colors					
Color	Green	Blue	Orange	Red	Yellow
Number	....	....	....	....	....

4 Add:

١ 48 + 35 = ...	٨ 53 + 28 = ...	١٥ 48 + 35 = ...
٢ 49 + 16 = ...	٩ 67 + 14 = ...	١٦ 26 + 11 = ...
٣ 78 + 8 = ...	١٠ 89 + 9 = ...	١٧ 78 + 8 = ...
٤ 7 + 65 = ...	١١ 4 + 69 = ...	١٨ 7 + 65 = ...
٥ 65 + 15 = ...	١٢ 11 + 69 = ...	١٩ 5 + 65 = ...
٦ 3 + 7 = ...	١٣ 28 + 8 = ...	٢٠ 43 + 7 = ...
٧ 7 + 53 = ...	١٤ 5 + 65 = ...	٢١ 53 + 7 = ...

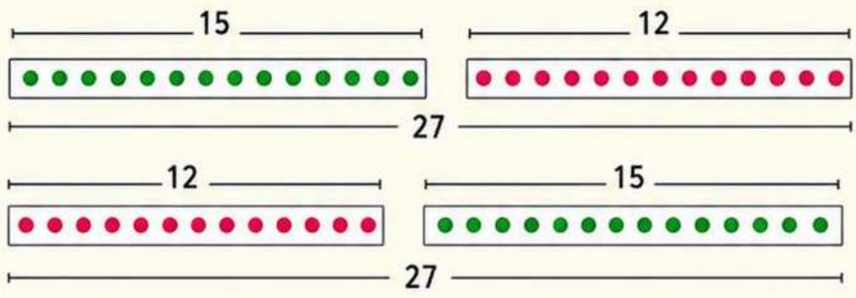
D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Lesson 5 Add the Numbers (Part Five)

Let's Learn Addition Properties:

- **Commutative Property of Addition:** When changing the order of two numbers, the sum remains the same.

Example



12 + 15 = 15 + 12

27 27

1 Example 1 Write the missing numbers using the addition property:

1. 17 + 14 = ... + 17
2. 22 + 18 = ... + 22
3. 14 + 17 = 17 + ...

How to Solve

☆ In addition, when changing the order of two numbers, the sum does not change.

1. 14 + 17 = 17 + 14
2. 22 + 18 = 18 + 22
3. 27 + 13 = 13 + 27

2 Example 2 Write the following calculations using another correct method:

1. 45 + 23
2. 18 + 31

How to Solve

1. 45 + 23 = 23 + 45
2. 18 + 31 = 31 + 18

3 Example 3 Read, then write the calculation using two different methods:

Sarah has 14 balloons, and Maryam has 11 balloons.

How many balloons do they have altogether with Sarah and Maryam?

How to Solve

Method 1: Sarah and Maryam

Calculation: ☆ 14 + 11 = 11 + 14 = 25

Answer: ☆ 25 balloons

Method 2: Maryam and Sarah

Calculation: ☆ 11 + 14 = 14 + 11 = 25

Answer: ☆ 25 balloons

Try It Write the missing numbers using the addition property:

1. 14 + 25 = 25 + ...
2. 16 + 10 = ... + 16
3. 39 + 11 = ... + 39

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

1 Write the missing numbers to make each addition sentence true:

18 + ____ = 48 + 18 (1)	____ + 23 = 23 + 10 (2)	____ + 19 = 19 + 15 (3)
67 + 12 = ____ + 67 (4)	72 + 12 = ____ + 72 (5)	75 + 24 = ____ + 75 (6)
____ + 45 = ____ + 18 (7)	64 + 21 = 21 + ____ (8)	29 + 35 = 35 + ____ (9)

2 Match each pair of addition sentences that have the same answer without calculating:

(1) 19 + 7 (2) 3 + 38 (3) 48 + 42 (4) 29 + 52

3 + 19 52 + 29 42 + 48 38 + 3 7 + 19

3 Match each pair of addition sentences that have the same answer without calculating:

(1) 12 + 5 (2) 6 + 45 (3) 36 + 59 (4) 12 + 75

5 + 12 42 + 48 75 + 12 59 + 36 45 + 6

4 Write the addition sentences in another way using the commutative property of addition, then find the result in each case:

Example

25 + 64 = 89 ☆
89 = 64 + 25 ☆

(1) 15 + 67 = ______
= ______ ☆

(2) 34 + 59 = ______
= ______ ☆

(3) 28 + 49 = ______
= ______ ☆

(4) 35 + 54 = ______
= ______ ☆

(5) 42 + 36 = ______
= ______ ☆

(6) 0 + 91 = ______
= ______ ☆

(7) 84 + 6 = ______
= ______ ☆

(8) 7 + 36 = ______
= ______ ☆

(9) 85 + 9 = ______
= ______ ☆

(10) 8 + 42 = ______
= ______ ☆

(11) 37 + 7 = ______
= ______ ☆

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Read, then write the addition operation in two different ways and find the answer:

1 There are 37 red flowers and 49 white flowers. What is the total number of flowers?

First way:
Operation: ....
Answer: ....

Second way:
Operation: ....
Answer: ....

2 Leila has 56 pieces of chocolate, and Khazar has 25 pieces of biscuits.
What is the total number of pieces they have together?

First way:
Operation: ....
Answer: ....

Second way:
Operation: ....
Answer: ....

3 There are 28 hardcover books and 64 paperback books. What is the total number of books?

First way:
Operation: ....
Answer: ....

Second way:
Operation: ....
Answer: ....

4 There are 63 boys and 29 girls in the class. What is the total number of students?

First way:
Operation: ....
Answer: ....

Second way:
Operation: ....
Answer: ....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

TEST ON CHAPTER 2: ADDITION

1 Find the sum using the vertical method:

(1) 27 + 12

Tens	Ones	
....	....	
....	....	+

(2) 19 + 78

Tens	Ones	
....	....	
....	....	+

(3) 26 + 8

Tens	Ones	
....	....	
....	....	+

(4) 6 + 54

Tens	Ones	
....	....	
....	....	+

(5) 5 + 80

Tens	Ones	
....	....	
....	....	+

(6) 3 + 27

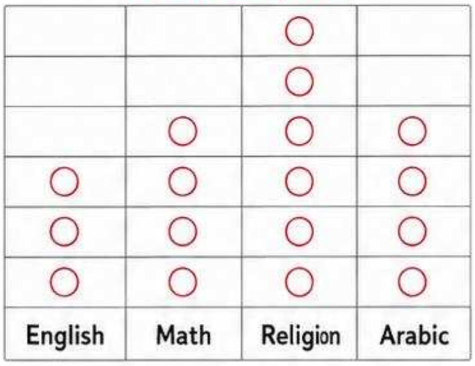
Tens	Ones	
....	....	
....	....	+

2 Match each pair of addition sentences that have the same answer without calculating:

12 + 75 (1)	6 + 45 (2)	36 + 59 (3)	12 + 5 (4)
5 + 12	59 + 36	42 + 48	75 + 12

3 Look at the picture below, then answer:

Favorite Subjects



(1) Transfer the numbers from the picture to the table below.

Favorite Subjects

Arabic	Religion	Math	English	Subject
....	....	....	....	Number

(2) Which subject is preferred by the largest number of students?

....

(3) What is the total number of students who prefer Religion and Math?

....

4 Read, then write the addition operation and the answer:

Kareem has 24 story books and his uncle gave him 27 more books.

What is the total number of books Kareem has now?

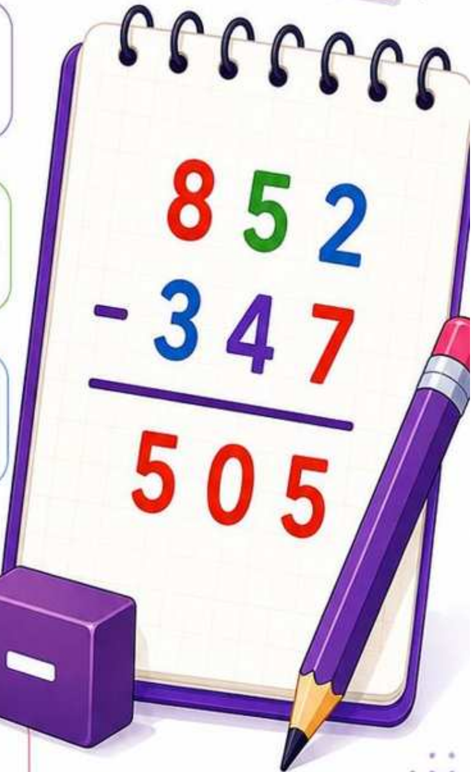
Operation: .... ☆

Answer: .... ☆

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

CHAPTER 3
VERTICAL SUBTRACTION

Lesson 1: Vertical Subtraction (Part 1) ....
Lesson 2: Vertical Subtraction (Part 2) ....
Lesson 3: Vertical Subtraction (Part 3) ....
Lesson 4: Vertical Subtraction (Part 4) ....
Lesson 5: The Relationship Between Addition and Subtraction ....



D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

1&2 Lesson

- Vertical Subtraction (Part 1)
- Vertical Subtraction (Part 2)

1 Let's Learn

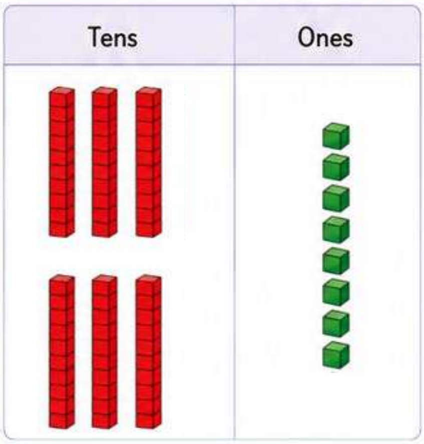
Subtract two two-digit numbers.

First

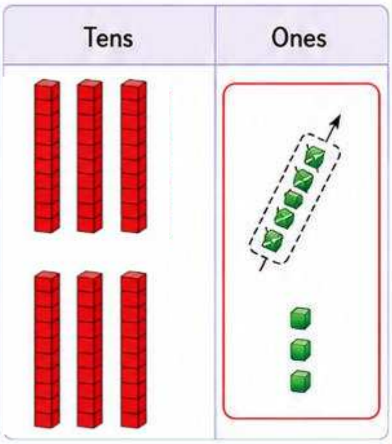
Subtract using models:

Tip You can find 68 – 25 using the following models:

1 Represent the greater number (68) using tens blocks and ones cubes.

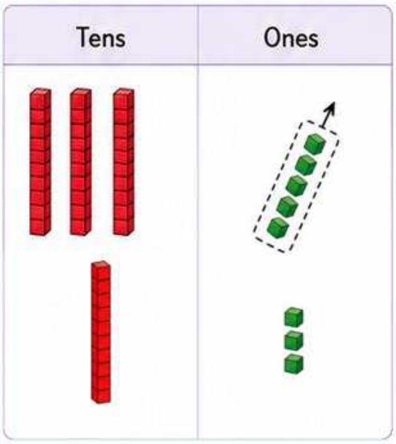


2 Subtract 5 ones.
This represents 25 ones.



3 ones left

3 Subtract 2 tens.
This represents 25.



4 tens and 3 ones

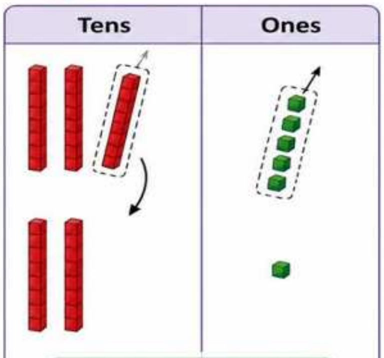
Therefore: 68 – 25 = 43

Example **1** Find each result using the model:

1) 35 – 14 **1** 2) 57 – 22 **2** 3) 77 – 33

Solution **Find each result using the model:**

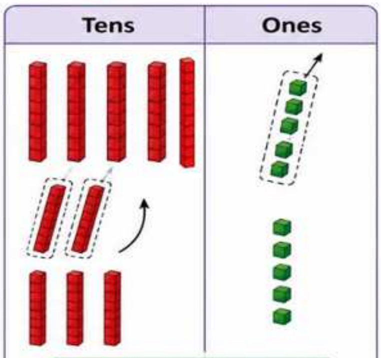
1 35 – 14



3 tens and 1 one

35 – 14 = 21

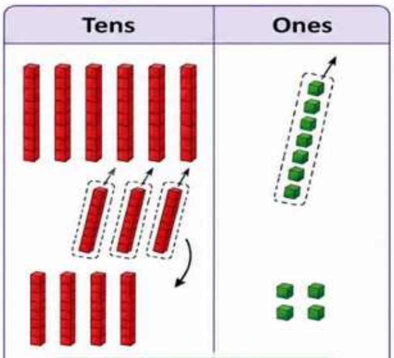
2 57 – 22



3 tens and 5 ones

57 – 22 = 35

3 77 – 33



4 tens and 4 ones

77 – 33 = 44

Tip: Use the models to regroup: exchange 1 ten for 10 ones when you need more ones to subtract.

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Solution 1 Find the result of each subtraction using the place value method:

1) 34 – 12 = ...

Tens	Ones

2) 47 – 25 = ...

Tens	Ones

3) 66 – 33 = ...

Tens	Ones

Part Two Subtract using the place value table (standard method):

Example You can find the difference of 76 – 35 using the place value table as follows:

1) Write the numbers one above the other according to place value.

Tens	Ones
7	6
3	5
....	....

–

2) Subtract the ones according to place value.
6 – 5 = 1

Tens	Ones
7	6
3	5
....	1

–

3) Subtract the tens according to place value.
7 – 3 = 4

Tens	Ones
7	6
3	5
4	1

–

So: 76 – 35 = 41 ☆

Solve using the alternative method ◀

41 = 35 – 76

Example 2 Find the result of each subtraction using the standard method:

1) 46 – 12   2) 65 – 25   3) 88 – 83

Solution Method ☆ Start by subtracting the ones, then subtract the tens.

• We don't write in the ones column.

1)

Tens	Ones
4	6
1	2
3	4

–

6 – 2 = 4   4 – 1 = 3

2)

Tens	Ones
6	5
2	5
4	0

–

5 – 5 = 0   6 – 2 = 4

1)

Tens	Ones
8	8
8	3
0	5

–

8 – 3 = 5   8 – 8 = 0

Solution 2 Find the result of each subtraction:

1) 35 – 23 = ...   2) 64 – 34 = ...   3) 74 – 71 = ...

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Learn 2 Subtract a one-digit number from a two-digit number:

☆ When subtracting a one-digit number from a two-digit number, subtract the ones *first*, then the tens, and keep the same ones digit.

Example You can find the difference of 48 − 6 using the place value table as follows:

1. Write the numbers one above the other according to place value.

Tens	Ones	
4	8	−
	6	
....	....	

2. Subtract the ones according to place value.
8 − 6 = 2

Tens	Ones	
4	8	−
	6	
....	2	

3. Bring down the tens digit (4) as it is.

Tens	Ones	
4	8	−
	6	
4	2	

So: 48 − 6 = 42 ☆

Solve using the alternative method ◀

42 = 6 − 48

Example 3 Find the result of each subtraction using the standard method:

1. 16 − 3
2. 45 − 4
3. 66 − 6

Solution Method ☆ Subtract the ones first, then the tens, and keep the same ones digit.

▸ Subtract the ones first. Then subtract the tens.

1.

Tens	Ones	
1	6	−
	3	
1	3	

6 − 3 = 3 1 − 0 = 1

2.

Tens	Ones	
4	5	−
	4	
4	1	

5 − 4 = 1 4 − 0 = 4

3.

Tens	Ones	
6	6	−
	6	
6	0	

6 − 6 = 0 6 − 0 = 6

Solution 3 Find the result of each subtraction:

1. 35 − 4 = ...
٢. 76 − 5 = ...
3. 28 − 8 = ...
4. 61 − 4 = ...
5. 88 − 3 = ...
6. 49 − 9 = ...
7. 58 − 8 = ...
8. 68 − 9 = ...

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Learn 3 Solve word problems using subtraction:

Example 4 Read, write the subtraction sentence, then write the operation and the answer:

Laila had 45 colored pencils. She gave 14 of them to her friend.
How many pencils does Laila have left?

Solution To find how many pencils Laila has left, we use subtraction.

★ The subtraction sentence:

45 − 14 = 31

Tens	Ones	
4	5	
1	4	−
3	1	

Write the answer in a complete sentence. → Answer: 31 pencils.

Note

- The words that show the subtraction operation are:

left (remains) | less | fewer | the difference

Example 5 Read, write the subtraction sentence, then write the operation and the answer:

Ahmed has 39 soccer balls. He gave 8 of them to his cousin.
How many soccer balls does Ahmed have left?

Solution To find how many soccer balls Ahmed has left, we use subtraction.

★ The subtraction sentence:

39 − 8 = 31

Tens	Ones	
3	9	
0	8	−
3	1	

Write the answer in a complete sentence. → Answer: 31 soccer balls.

Solution 4 Read, then write the subtraction sentence and the answer:

Hind has 35 flowers, and she gives 23 flowers to her friend Zahra.
Find the difference between the number of flowers they have.

★ The subtraction sentence: ....

★ The answer: ....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Homework

1 Find the result of each subtraction using the place value method:

① 38 – 12 = ...

Tens	Ones

② 47 – 25 = ...

Tens	Ones

③ 66 – 33 = ...

Tens	Ones

④ 39 – 14 = ...

Tens	Ones

⑤ 75 – 64 = ...

Tens	Ones

⑥ 69 – 38 = ...

Tens	Ones

2 Find the result of each subtraction below:

①

2	5
1	3
....	....

②

3	6
1	4
....	....

③

4	8
3	6
....	....

④

5	5
2	2
....	....

⑤

3	5
2	1
....	....

⑥

7	6
2	5
....	....

⑦

7	6
4	2
....	....

⑧

3	5
5	1
....	....

⑨

8	7
2	7
....	....

⑩

6	6
2	6
....	....

⑪

9	5
2	9
....	....

⑫

2	4
1	4
....	....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

3 **Find the result as shown in the example:**

① 27 – 12 📖

Tens	Ones	
....	....	
....	....	–
....	....	

② 38 – 23 📖

Tens	Ones	
....	....	
....	....	–
....	....	

③ 59 – 18 📖

Tens	Ones	
....	....	
....	....	–
....	....	

④ 68 – 44 📖

Tens	Ones	
....	....	
....	....	–
....	....	

⑤ 98 – 76 📖

Tens	Ones	
....	....	
....	....	–
....	....	

⑥ 96 – 76 📖

Tens	Ones	
....	....	
....	....	–
....	....	

⑦ 83 – 33 📖

Tens	Ones	
....	....	
....	....	–
....	....	

⑧ 79 – 75 📖

Tens	Ones	
....	....	
....	....	–
....	....	

⑨ 76 – 72 📖

Tens	Ones	
....	....	
....	....	–
....	....	

---

4 **Solve as shown in the example:**

Example: 48 – 26 = 22

① 76 – 54 📖 = ______
② 86 – 65 📖 = ______
③ 49 – 42 📖 = ______
④ 97 – 22 📖 = ______
⑤ 28 – 14 📖 = ______
⑥ 36 – 12 📖 = ______
⑦ 47 – 35 📖 = ______
⑧ 57 – 33 📖 = ______
⑨ 49 – 27 📖 = ______
⑩ 99 – 79 📖 = ______
⑪ 89 – 86 📖 = ______

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Find the result using the vertical subtraction method:

① 39 – 6 =

Tens	Ones	
....	....	
....	....	–
....	....	

② 45 – 4 =

Tens	Ones	
....	....	
....	....	–
....	....	

③ 67 – 7 =

Tens	Ones	
....	....	
....	....	–
....	....	

④ 58 – 6 =

Tens	Ones	
....	....	
....	....	–
....	....	

⑤ 38 – 8 =

Tens	Ones	
....	....	
....	....	–
....	....	

⑥ 99 – 9 =

Tens	Ones	
....	....	
....	....	–
....	....	

⑦ 59 – 7 =

Tens	Ones	
....	....	
....	....	–
....	....	

⑧ 75 – 4 =

Tens	Ones	
....	....	
....	....	–
....	....	

⑨ 34 – 4 =

Tens	Ones	
....	....	
....	....	–
....	....	

Subtract, then find the equal result:

.... = 88 – 28 .... = 77 – 35 .... = 25 – 13

.... = 72 – 12 .... = 44 – 32 .... = 58 – 16

Subtract, then circle the greatest result in each set:

42 – 2	53 – 23	42 – 11	64 – 12
....	....	....	....
76 – 33	65 – 15	32 – 31	55 – 31
....	....	....	....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Word Problems on Subtraction:

Read, then write the mathematical operation and the answer:

① Mek has 47 pieces of candy. He gave 12 pieces to his friend.
How many pieces of candy does Mek have left?

Mathematical operation: ....: ☆

Answer: ....: ☆

② Mahmoud had 99 pounds. He spent 25 pounds.
How many pounds does he have left?

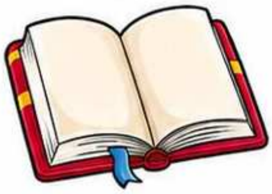
Mathematical operation: ....: ☆

Answer: ....: ☆

③ There were 38 students on the bus. 18 students got off.
How many students are still on the bus now?

Mathematical operation: ....: ☆

Answer: ....: ☆



④ A book has 87 pages. Sara read 27 pages.
How many pages are left for Sarah to read?

Mathematical operation: ....: ☆

Answer: ....: ☆

⑤ Yasmin has 25 pictures, and Walid has 14 pictures.
How many more pictures does Yasmin have than Walid?

Mathematical operation: ....: ☆

Answer: ....: ☆

⑥ Ahmed has 57 shells, and your brother has 14 shells.
How many more shells does Ahmed have than your brother?

Mathematical operation: ....: ☆

Answer: ....: ☆

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

End of Lesson 2 | 2 Up to the Lesson

Test Yourself

1 Choose the correct answer:

1. 57 – 49 = ... (24 ، 42 ، 22 ، 32)
2. 78 – 8 = ... (8 ، 80 ، 7 ، 70)
3. 90 = 99 – .... (39 ، 29 ، 19 ، 9)
4. Hind had 19 marbles and she gave 12 marbles to Jannah.
   Then, the number of marbles **remaining** with her = ... marbles (12 ، 13 ، 7 ، 31)

---

2 Find the arithmetic operations that have the same answer without calculating:

1. 18 + 12
2. 36 + 24
3. 19 + 58
4. 22 + 58

58 + 22	24 + 36	12 + 18	58 + 19	12 + 19

---

3 Find the result of the following:

(1) +

2	5
3	2
......	......

(2) +

4	3
2	6
......	......

(3) +

2	8
5	7
......	......

(4) +

3	4
	9
......	......

(5) –

4	3
1	2
......	......

(6) –

4	5
2	5
......	......

(7) –

7	5
7	3
......	......

(8) –

7	1
1	1
......	......

---

4 Read, then write the arithmetic operation and the answer:

1. Hossam has 35 marbles. He gave 23 of them to buy a book.
   What is the amount **remaining** with Hossam?
   Arithmetic operation: ☆ .... Answer: ☆ ....

2. Saed read 13 pages of a book, and he read 59 pages yesterday.
   What is the **sum** of what he read in both days?
   Arithmetic operation: ☆ .... Answer: ☆ ....

4

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Lesson 3 & 4

1. Vertical Subtraction (Part 3)
2. Vertical Subtraction (Part 4)

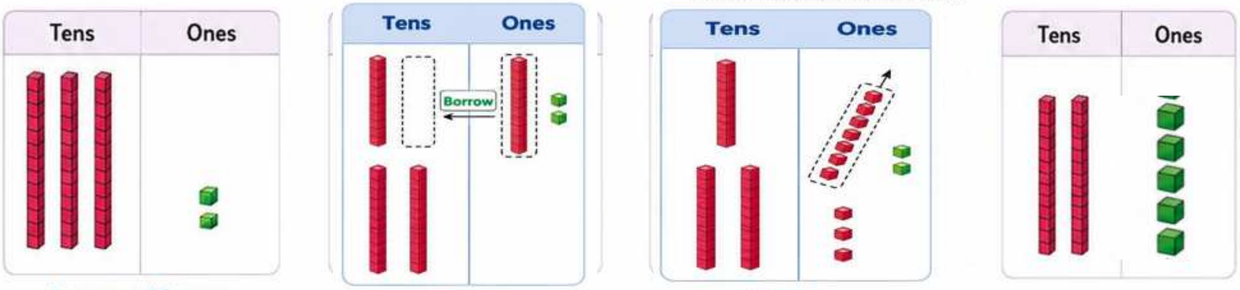
Learn 1 Subtract any two-digit numbers by regrouping.

★ When you cannot subtract the ones digit, take 1 ten from the tens column (10 ones) and add it to the ones column; then subtract the ones digits and subtract the tens digits.

Example We can find the result of 42 – 17 in two different ways:

First: Using models

1. Represent the larger number (42) using tens rods and unit cubes.
2. Subtract (7) unit cubes from the ones column.
3. Since there aren't enough ones, take (1) ten rod and change it into 10 ones and add it to the ones column.
4. Now subtract the 10 ones. Then subtract the tens.



4 tens and 2 ones

12 ones

5 ones

★ So we get: 42 – 17 = 25

Second: Using place value (traditional method)

1. Write the numbers one under the other according to their place value.

	Tens	Ones
	4	2
–	1	7

2. Since you cannot subtract 7 ones from 2 ones, take 1 ten from the tens column (10 ones).

	Tens	Ones
	~~4~~ 3	~~2~~ 12
–	1	7

3. Now subtract the ones, then subtract the tens.

	Tens	Ones
	3	12
	1	7
	2	5

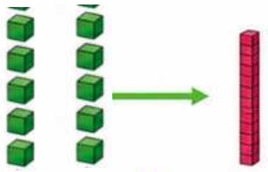
4. Write the result according to the place value.

	Tens	Ones
	3	12
–	1	7
	2	5

★ So we get: 42 – 17 = 25

Remember

★ When you cannot subtract the ones, you must regroup: borrow 1 ten (from the tens column) and change it into 10 ones, then add them to the ones column.



1 ten = 10 ones

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

1 Example: Find the result of each subtraction using the standard method.

1. 35 – 17
2. 50 – 29
3. 62 – 58

Solution:

5 – 5 = 0
You cannot write 0 in the ones place.

1.

	Tens	Ones
	2 ~~3~~	15 ~~5~~
–	1	7
	1	8

2.

	Tens	Ones
	4 ~~5~~	10 ~~0~~
–	2	9
	2	1

3.

	Tens	Ones
	5 ~~6~~	12 ~~2~~
–	5	8
	5	4

2 Example: Read the problem, then write the subtraction operation and the answer.

- Salma had 91 yellow roses and 67 purple roses in a vase.

Which color of roses are more, and by how many?

	Tens	Ones
	8 ~~9~~	11 ~~1~~
–	6	7
	2	4

Solution:

- Yellow roses are more than purple roses.

☆ Subtraction operation: 91 – 67 = 24

The answer must be written in the answer line. → Answer: 24 roses

1 Solve: Find the result of each subtraction.

1. 46 – 19 = ...
2. 70 – 25 = ...
3. 83 – 76 = ...

2 Solve: Read the problem, *then write the subtraction operation and the answer.*

- A library has 40 story books. It lent 12 of them.

How many books did not get lent?

☆ Subtraction operation: ....

☆ Answer: ....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Learn 2 Subtract one-digit numbers from two-digit numbers by regrouping.

Example We can find the result of 35 – 8 using the standard method as follows:

1 Write the numbers according to their place value.

	Tens	Ones
	3	5
–		8
	....	....

2 You cannot take 8 from 5, so take 1 ten from the tens column. Then subtract 8 from 15.

	Tens	Ones
	2 ~~3~~ ↓	15 ~~5~~
–		8
	....	7

3 Write the number of tens in the tens column. (2 tens = 20)

	Tens	Ones
	2	~~15~~
–		8
	2	7

⭐ So: 35 – 8 = 27

Example 3 Find the result of each subtraction using the standard method.

1 24 – 9 **2** 40 – 4 **3** 77 – 9

Solution:

1

	Tens	Ones
	1 ~~2~~ ↓	14 ~~4~~
–		9
	1	5

2

	Tens	Ones
	3 ~~4~~ ↓	10 ~~0~~
–		4
	3	6

3

	Tens	Ones
	6 ~~7~~ ↓	17 ~~7~~
–		9
	6	8

Example 4 Read the problem, then write the subtraction operation and the answer.

- Ahmed has 25 pieces of chocolate.
- He gave Ahmed 9 pieces to his friend.

How many pieces of chocolate does Ahmed have left?

Solution

Step 1 Write the subtraction operation:

⭐ 25 – 9 = 16

Step 2 Write the answer:

⭐ 16 pieces of chocolate.

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Homework

1 Subtract each of the following two-digit numbers from numbers that require regrouping:

Find the result of each subtraction using the standard method:

(1) 52 − 18 =

Tens	Ones

(2) 95 − 29 =

Tens	Ones

(3) 34 − 17 =

Tens	Ones

(4) 73 − 27 =

Tens	Ones

(5) 54 − 39 =

Tens	Ones

(6) 62 − 38 =

Tens	Ones

2 Find the result of each subhaction below:

(1)	(2)	(3)	(4)	(5)
53 − 16 = ...	31 − 15 = ...	15 − 51 = ...	48 − 19 = ...	60 − 25 = ...

(6)	(7)	(8)	(9)	(10)
74 − 48 = ...	27 − 34 = ...	52 − 25 = ...	60 − 36 = ...	56 − 42 = ...

(11)	(12)	(13)	(14)	(15)
40 − 39 = ...	80 − 73 = ...	91 − 84 = ...	70 − 21 = ...	90 − 47 = ...

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

3 Find the result of each subtraction using the standard method:

① 32 − 18

Tens	Ones
....	....
....	.... −
....	....

② 34 − 19

Tens	Ones
....	....
....	.... −
....	....

③ 42 − 23

Tens	Ones
....	....
....	.... −
....	....

④ 72 − 44

Tens	Ones
....	....
....	.... −
....	....

⑤ 56 − 39

Tens	Ones
....	....
....	.... −
....	....

⑥ 73 − 26

Tens	Ones
....	....
....	.... −
....	....

⑦ 40 − 25

Tens	Ones
....	....
....	.... −
....	....

⑧ 30 − 19

Tens	Ones
....	....
....	.... −
....	....

⑨ 60 − 36

Tens	Ones
....	....
....	.... −
....	....

⑩ 41 − 34

Tens	Ones
....	....
....	.... −
....	....

⑪ 63 − 57

Tens	Ones
....	....
....	.... −
....	....

⑫ 21 − 16

Tens	Ones
....	....
....	.... −
....	....

4 Subtract:

① 43 − 17 = ...
② 65 − 49 = ...
③ 74 − 27 = ...
④ 88 − 49 = ...
⑤ 73 − 56 = ...
⑥ 97 − 49 = ...
⑦ 30 − 25 = ...
⑧ 24 − 17 = ...
⑨ 44 − 36 = ...
⑩ 60 − 28 = ...
⑪ 80 − 52 = ...
⑫ 90 − 49 = ...

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

5 Read each problem, then write the calculation and the answer:

1 Ya'qub has 37 toys, Raji has 18 toys.
How many more toys does Ya'qub have than Raji?

The calculation: ....

The answer: ....

2 There are 43 birds, 18 of them are inside the cage.
How many birds are outside the cage?

The calculation: ....

The answer: ....

3 With Mohammed, he kept 43 pounds, he spent 19 pounds.
How many pounds did he keep with him?

The calculation: ....

The answer: ....

4 The bus had 22 passengers, 18 of them got off.
How many passengers are left on the bus now?

The calculation: ....

The answer: ....

5 Malek had 33 balloons and gave his sister 28 balloons.
How many balloons does he have now?

The calculation: ....

The answer: ....

6 Hend has 50 pounds, and with Ahmed she has 28 pounds.
How many pounds do they have together?

The calculation: ....

The answer: ....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

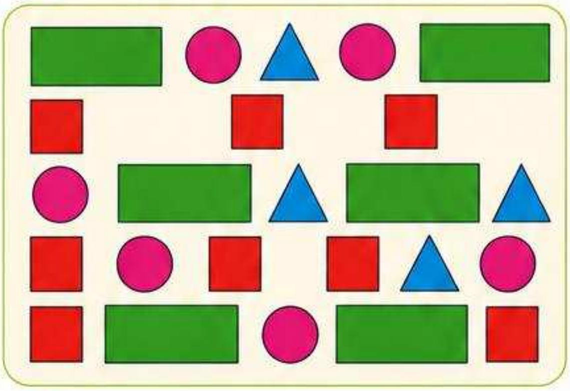
Lesson 4 — Test Yourself

1 Choose the correct answer:

1. 33 – 15 = ... (12 , 18 , 8 , 4)
2. 75 – 36 = ... (29 , 32 , 39 , 43)
3. 90 – 28 = ... (27 , 72 , 26 , 62)
4. 76 – 68 = ... (19 , 18 , 8 , 9)
5. 3 + 50 = ... (74 , 47 , 53 , 37)
6. 14 + 35 = ... (94 , 21 , 24 , 49)

2 Observe the shapes:

Count the geometric shapes and complete the table.



Shape	Circle	Triangle	Rectangle	Square
Tally Marks				
Number	....	....	....	....

2. Write the number of geometric shapes in the table below.

Shape	Circle	Triangle	Rectangle	Square
Number	....	....	....	....

3 Read each problem, then write the calculation and the answer.

1. Samir has 68 pounds, he spent 39 pounds on buying film tickets.
How many pounds does he have left?
The calculation: ....
The answer: ....

2. Mohamed bought 13 balls and gave his brother 28 balls.
What is the total number of balls they have?
The calculation: ....
The answer: ....

3. Hend has 50 pounds, and Ahmed has 28 pounds.
What is the total amount of money they have together?
The calculation: ....
The answer: ....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

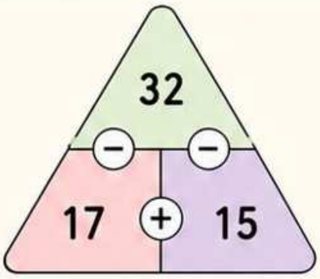
5 The Relationship Between Addition and Subtraction Lesson

Learn

The relationship between addition and subtraction:

We can check the answer to an addition or subtraction problem by using the relationship:

(Difference + Subtrahend = Minuend)



For example

32	−	15	=	17
Minuend		Subtrahend		Difference

To check the answer: ☆

15 + 17 = 32

1 **Example:** Complete each fact family. Then check the answer using addition.

23 − 12 = 11 | 45 − 28 = 17 | 67 − 9 = 58

Solution Method

1

23 − 12 = 11

Check: 12 + 11 = 23 ☆

2

45 − 28 = 17

Check: 28 + 17 = 45 ☆

3

67 − 9 = 58

Check: 9 + 58 = 67 ☆

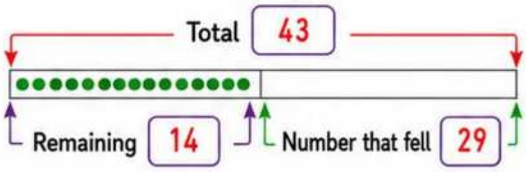
---

2 **Example:** Read, then solve:

☆ There are 43 apples on the tree. Some of them fell, and 14 apples remained on the tree.

1 Write a number sentence that represents the situation. [ ]

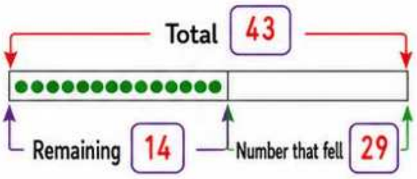
2 How many apples fell? (Write the addition sentence and the answer.)



3 Check the answer using the addition sentence.

Solution Method

1



2

☆ Number sentence: 43 − 14 = 29

☆ Addition sentence: 14 + 29 = 43

Answer: 29 apples fell.

3

Check: 14 + 29 = 43

→

14 + 29 = 43

(Difference + Subtrahend = Minuend)

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

1 Find the result of the subtraction, then check the answer as in the example: **Example**

(1) 83 – 42 = ... Check:	(2) 68 – 35 = ... Check:	24 – 13 = 11 Check: 13 + 11 = 24
(4) 75 – 4 = ... Check:	(5) 97 – 6 = ... Check:	(3) 43 – 2 = ... Check: ....
(7) 73 – 25 = ... Check:	(8) 34 – 26 = ... Check:	(6) 62 – 41 = ... Check: ....
(10) 95 – 8 = ... Check:	(11) 71 – 5 = ... Check:	(9) 45 – 9 = ... Check: ....

2 Find the relationship between subtraction and addition (Difference + Subtrahend = Minuend):

(1) 56 – 39 (2) 21 – 8 (3) 34 – 24 (4) 60 – 3

29 + 8 | 17 + 39 | 57 + 3 | 10 + 24 | 13 + 8

3 Find the relationship between subtraction and addition (Difference + Subtrahend = Minuend):

(1) 40 – 7 (2) 55 – 15 (3) 71 – 68 (4) 65 – 9

7 + 33 | 68 + 3 | 47 + 7 | 40 + 15 | 56 + 9

4 Solve each problem correctly. Check the correctness of each arithmetic operation in it:

(1) 19 – 5 = 14 19 = 14 + 5 14 = 19 – 5	(2) 16 – 3 = 13 16 = 13 + 3 13 = 16 – 3	(3) 20 – 5 = 15 20 = 15 + 5 15 = 20 – 5
(4) 27 – 15 = 12 27 = 12 + 15 12 = 27 – 15	(5) 17 – 4 = 13 17 = 13 + 4 13 = 17 – 4	(6) 20 – 4 = 16 20 = 16 + 4 16 = 20 – 4

(7) 10 – 3 = 7 10 = 7 + 3 7 = 10 – 3

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

TEST ON CHAPTER 3

1 Find the result of each of the following:

(1) 22 + 15 = ...

Tens	Ones
....	....
....	....

(+)

(2) 39 + 45 = ...

Tens	Ones
....	....
....	....

(+)

(3) 74 + 7 = ...

Tens	Ones
....	....
....	....

(+)

(4) 50 − 3 = ...

Tens	Ones
....	....
....	....

(−)

(5) 75 − 37 = ...

Tens	Ones
....	....
....	....

(−)

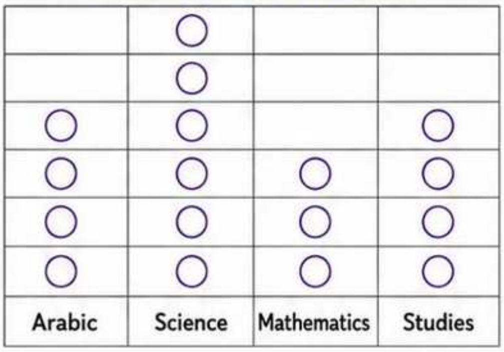
(6) 28 − 15 = ...

Tens	Ones
....	....
....	....

(−)

2 Look at the graph opposite, then answer:

Number of Favorite Subjects



(1) Transfer the numbers from the graph to the table below:

Number of Favorite Subjects

Subject	Arabic	Science	Mathematics	Studies
Number	....	....	....	....

(2) Which subject is preferred by the fewest students?

....

(3) What is the difference between the number of students who prefer Science and those who prefer Mathematics and Studies?

....

3 Solve the following word problems:

(1) Mohamed has 24 colored pencils. He buys 35 more pencils.
What is the total number of pencils Mohamed has?

Operation: .... ☆

Answer: .... ☆

(2) In a class, there are 18 boys and 21 girls.
Which number is greater, and what is the difference between them?

The greater number is: .... ☆

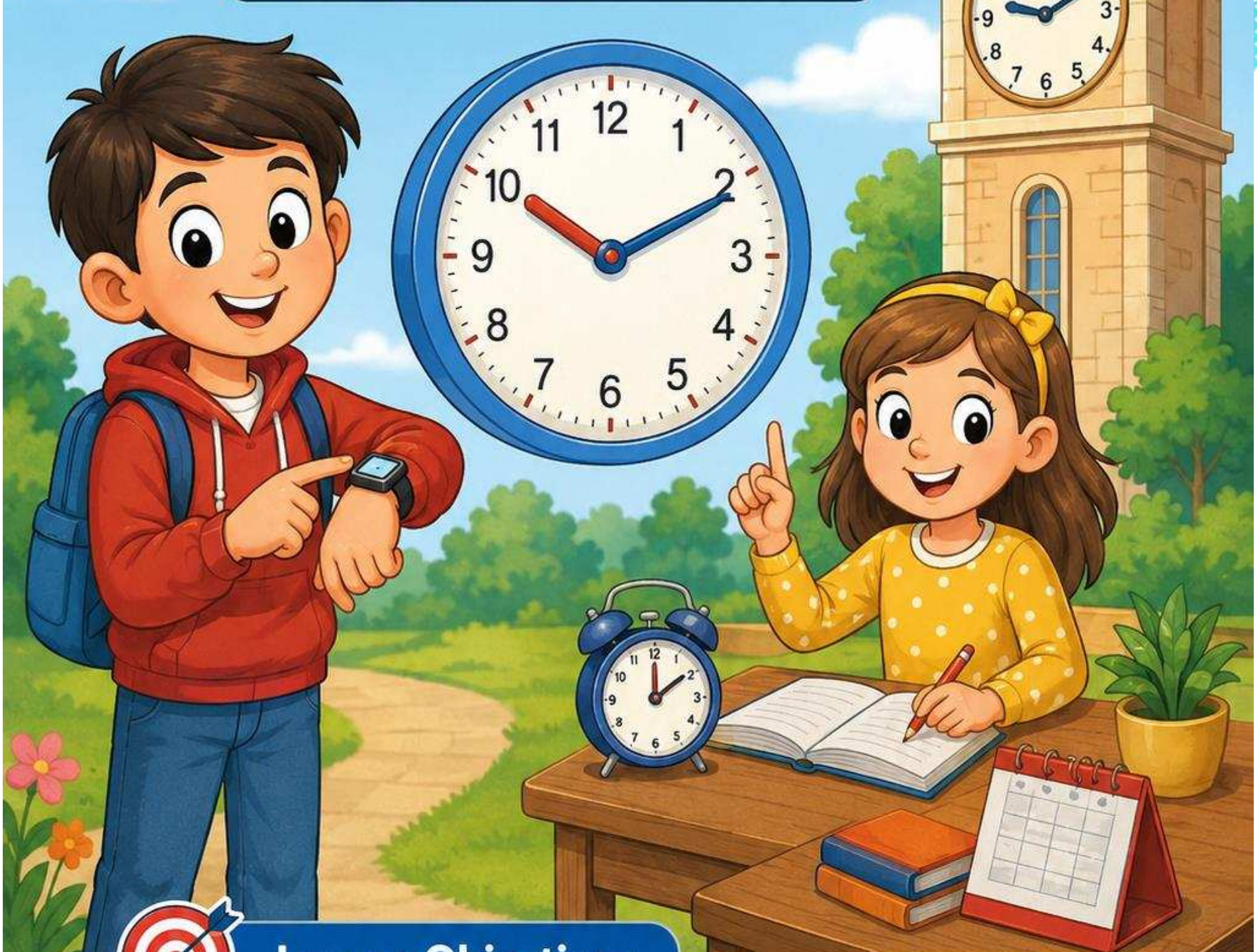
Operation: .... ☆

Answer: .... ☆

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

4 Chapter

Time and Elapsed Time



Lesson Objectives

Lesson (1): Time and Elapsed Time (Part One)

- The student reads the time to the hour.
- The student determines elapsed time from a given time to another.
- The student finds the time to an hour from a given time.

Lesson (2): Time and Elapsed Time (Part Two)

- The student divides the day into morning and evening.
- The student distinguishes between daily activities: some in the morning and some in the evening.
- The student expresses time using A.M. and P.M.

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

TIME AND DURATION (PART ONE)

Lesson Time and Duration (Part One) 1 Lesson

Reading time: 1 Learn

The hour 3 or the third hour

A clock has two hands:

- ☆ The minute hand (the long hand)
- ☆ The hour hand (the short hand)
- ☆ The time shown by the minute hand is called the minute.
  One mark on the clock = one minute.
  The time shown by the hour hand needs the minute hand to complete a full cycle of 60 minutes.
- Therefore: 1 hour = 60 minutes

Example 1 Write the time shown on each clock:

4
3
2
1

Method of solution

1. Hour 1:00 (the long hand points to 12 and the short hand points to 1)
2. Hour 2:30 (the long hand points to 30 minutes and the short hand points between 2 and 3)
3. Hour 7:25 (the long hand points to 25 minutes and the short hand points between 7 and 8)
4. Hour 1:45 (the long hand points to 45 minutes and the short hand points between 1 and 2)

Solve ✓ 1 Write the time shown on each clock:

4
3
2
1

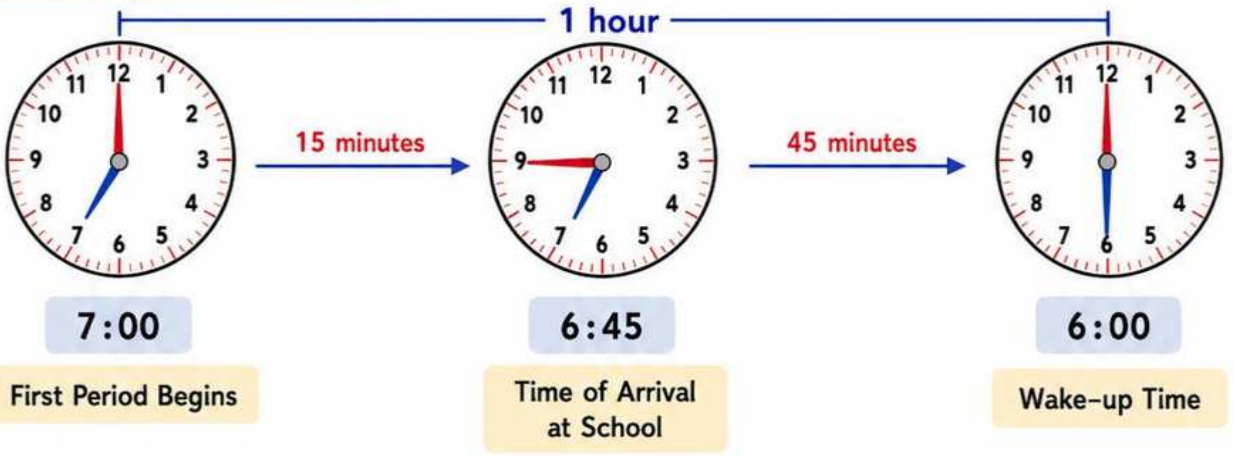
.... : .... : .... : .... : ....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Learn 2 Time and Duration:

Time duration: is the period of time between two times.

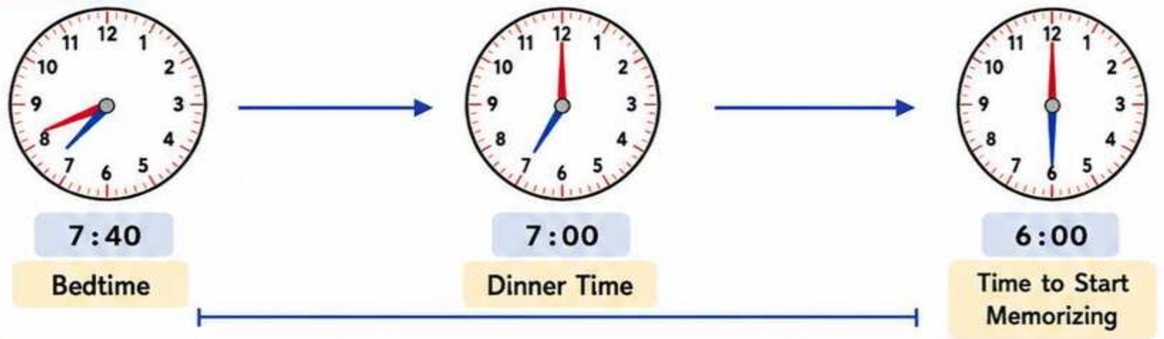
Observe the timeline below:



We find that:

- The number of minutes elapsed from Wake-up time until arrival at school is 45 minutes.
  (Because: The time duration from 6:00 to 6:45 is 45 minutes)
- The number of minutes elapsed from arrival at school until the first period begins is 15 minutes.
  (Because: The time duration from 6:45 to 7:00 is 15 minutes)
- The number of minutes elapsed from Wake-up time until the first period begins is 60 minutes.
  (Because: The time duration from 6:00 to 7:00 is 60 minutes)

Solve Observe the timeline below, then answer the questions:



1. How many minutes elapsed from the time to start memorizing until dinner time?
   ....
2. How many minutes elapsed from dinner time until bedtime?
   ....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Example 1 Look at the clocks, then write the time or time duration as required in each.

1

- The time after 30 minutes.
  = ...
- The time before 15 minutes.
  = ...

2

- The time after 30 minutes.
  = ...
- The time before 15 minutes.
  = ...

Solution

1 The time now: 4:00

- The time after 30 minutes from 4:00
  = 4:30
- The time before 15 minutes from 4:00
  = 3:45

2 The time now: 8:00

- The time after 30 minutes from 8:00
  = 8:30
- The time before 15 minutes from 8:00
  = 7:45

Example 2 Complete the following:

1 1 hour and 10 minutes = ... minutes.

2 1 hour and 55 minutes = ... minutes.

3 90 minutes = ... hour and .... minutes.

4 105 minutes = ... hour and .... minutes.

Solution

1 1 hour and 10 minutes = 70 minutes.

60 minutes + 10 minutes = 70 minutes

2 1 hour and 55 minutes = 115 minutes.

60 minutes + 55 minutes = 115 minutes

3 90 minutes = 1 hour and 30 minutes.

90 minutes = 60 minutes + 30 minutes

4 105 minutes = 1 hour and 45 minutes.

105 minutes = 60 minutes + 45 minutes

Note A full rotation of the minute hand on the clock equals 1 hour.

Example 3 Complete the following:

1 1 hour and 20 minutes = ... minutes.

2 1 hour and 35 minutes = ... minutes.

3 70 minutes = ... hour and .... minutes.

4 100 minutes = ... hour and .... minutes.

Solution

1 1 hour and 20 minutes = 80 minutes.

2 1 hour and 35 minutes = 95 minutes.

3 70 minutes = 1 hour and 10 minutes.

4 100 minutes = 1 hour and 40 minutes.

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Homework

READING TIME:

1 Write the time shown on each clock.

(1)
___ : ___

(2)
___ : ___

(3)
___ : ___

(4)
___ : ___

(5)
___ : ___

(6)
___ : ___

(7)
___ : ___

(8)
___ : ___

(9)
___ : ___

(10)
___ : ___

(11)
___ : ___

(12)
___ : ___

(13)
___ : ___

(14)
___ : ___

(15)
___ : ___

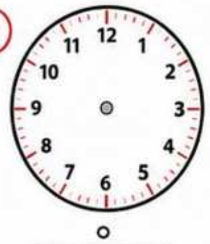
(16)
___ : ___

2 Draw the hour and minute hands on each clock to show the time given.

(1)
5 : 30

(2)
7 : 00

(3)
8 : 11

(4) 
10 : 08

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

3 Time and Duration

Observe the following timelines, then answer the questions.

1

10:00
Time of Leaving Home

10:20
Time of Waking Up

11:00
Time of Sleeping

- How many minutes from the time of leaving home until waking up?
  ....
- How many minutes from the time of leaving home until sleeping?
  ....

2

3:00
Study Time

4:00
Dinner Time

4:25
Return Home Time

- How many minutes from dinner time until study time?
  ....
- How many minutes from study time until return home time?
  ....

3

7:00
Wake-up Time

8:00
Time of Leaving Home

8:50
Arrival at the Library

- How many minutes from wake-up time until leaving home?
  ....
- How many minutes from leaving home until arrival at the library?
  ....

4

5:00
Club Arrival Time

5:15
Time to Start Exercise

5:55
End of Exercise Time

- How many minutes from club arrival time until start of exercise?
  ....
- How many minutes from club arrival time until end of exercise?
  ....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

1 Complete the following:

1. 1 hour = ... minutes
2. 1 hour and 10 minutes = ... minutes
3. 1 hour and 15 minutes = ... minutes
4. 1 hour and 25 minutes = ... minutes
5. 1 hour and 35 minutes = ... minutes
6. 1 hour and 45 minutes = ... minutes
7. 1 hour and 65 minutes = ... minutes
8. 70 minutes = ... hours and .... minutes
9. 75 minutes = ... hours and .... minutes
10. 95 minutes = ... hours and .... minutes
11. 100 minutes = ... hours and .... minutes

Multiple Choice Questions

7 Choose the correct answer:

1.
The time on the clock is ....
4 : 00 ، 12 : 00 ، 5 : 12 ، 12 : 05

2.
The time on the clock is ....
8 : 50 ، 8 : 05 ، 8 : 01 ، 1 : 08

3.
The time on the clock is ....
5 : 54 ، 5 : 14 ، 6 : 00 ، 5 : 11

4.
The time after 10 minutes is ....
2 : 12 ، 2 : 10 ، 10 : 02 ، 12 : 00

5. The time from nine forty (9 : 40) till nine forty-nine is .... minutes
40 4 31 49

6. 1 hour and 14 minutes = ... minutes
35 74 75 114

7. 80 minutes = ... hour and .... minutes
1 , 20 1 , 30 1 , 10 35 , 30

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Teacher's

1 Lesson 1 Test Yourself

1 Complete the following:

1. The time after 15 minutes from the clock is .... will be ....

2. The time before 45 minutes from the clock is .... will be ....

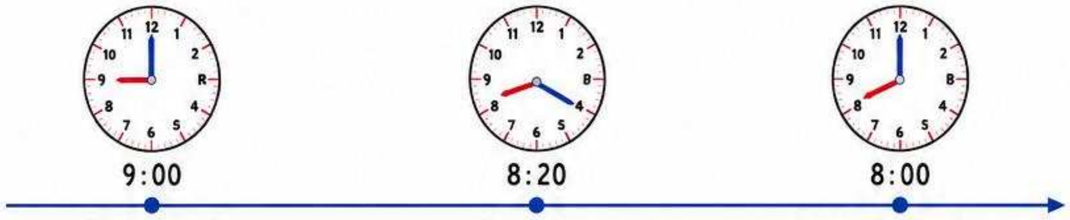
3. The time from the fifth hour (5:00) to the ninth hour (9:00) is .... minutes.

4. 1 hour and 22 minutes = ... minutes
5. 1 hour and 35 minutes = ... minutes
6. 35 minutes = ... hour and .... minutes
7. 65 minutes = ... hour and .... minutes
8. 1 hour = ... minutes
9. 75 minutes = ... hour and .... minutes

2 Find the result of the following:

1. 25 + 14 = ...
2. 72 + 3 = ...
3. 43 + 50 = ...
4. 48 – 26 = ...
5. 75 – 4 = ...
6. 45 – 41 = ...

3 Observe the following timeline, then answer:



1. How many minutes from break time until the start of work? ....
2. How many minutes from the end of leaving home until the start of work? ....

4 Read, then write the arithmetic operation and the answer:

1. Hamada has 28 pounds, and he took from his brother 43 pounds. What is the total amount of money with Hamada?
   Operation: ⭐ ....
   Answer: ⭐ ....

2. Ahmed wrote a book of 85 pages, and he read from it 38 pages. How many pages are left?
   Operation: ⭐ ....
   Answer: ⭐ ....

⭐ **Good Luck!** ⭐

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Lesson 2 Time and Duration (Part 2)

Morning and Evening

1 Learn: Morning and Evening

A day has 24 hours. It is divided into a morning period and an evening period, and each period contains 12 equal hours.

Time after 12 o'clock is called evening.

Evening

Go to bed | Do homework

Time before 12 o'clock is called morning.

Morning

Go to school | Wake up

Note: Time before 12 o'clock is called "morning", and time after 12 o'clock is called "evening".

Example 1 Observe the activities in each picture, then decide whether it is "morning" or "evening":

1. See the sun

2. See the stars

3. Return from school

4. Go to bed

Solution method: 1 Morning 2 Evening 3 Morning 4 Evening

Try It 1 Observe the activities in each picture, then decide whether it is "morning" or "evening":

1. Go to school

....

2. Do homework

....

3. See the stars

....

4. Have breakfast

....

Try It 2 Solve the following problems:

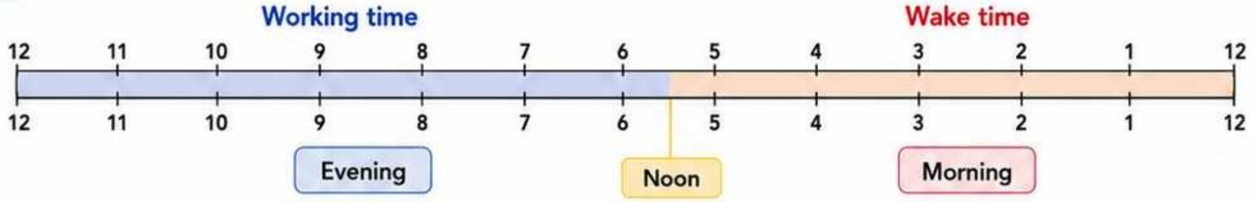
1. Hamada has 28 pounds, and he took from his brother 43 pounds. What is the total amount of money with Hamada?
   Operation: ....
   Answer: ....

2. Ahmed wrote a book of 85 pages, and he read from it 38 pages. How many pages are left?
   Operation: ....
   Answer: ....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Lesson 2 Telling the Time Using "Morning" and "Evening"

1 Look at the time diagram below:



Because the clock has 6 hours on the day where events occur twice, we add "morning" or "evening" to distinguish between them.

- The time 6 o'clock is morning. ☆
- The working time is 6 o'clock evening. ☆

☆ The number of hours from working time until 12 o'clock is 12 hours.

2 Write the times shown on the following clocks using "morning" or "evening", then answer:

1 In the morning: Go to school

.... : ....

2 After noon: Return home

.... : ....

3 In the evening: Have dinner

.... : ....

4 How many hours from return home until dinner time? ....

Solution method

1 7:30 a.m. → **2** 10:00 a.m. → **3** 4:00 p.m. → **4** From 1:00 p.m. to 4:00 p.m. is 3 hours.

✔ **Your Turn**

2 Write the times shown on the following clocks using "morning" or "evening", then answer:

1 In the morning: Go out from home

.... : ....

2 After noon: Go to the club

.... : ....

3 In the evening: Return to home

.... : ....

4 In the morning: Have breakfast

.... : ....

3 Solve: Write the times shown on the clocks using "morning" or "evening", then answer:

1 In the morning: Leave home

.... : ....

2 After noon: Return to the club

.... : ....

3 In the evening: Return home

.... : ....

4 How many hours from return to the club until return home? ....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Example 3 Complete by writing "morning" or "evening" in each of the following:

1. .... Mariam goes to school at 7:30.
2. .... Khaled finishes his homework at 4:00.
3. .... Leila has dinner at 8:30.
4. .... Ahmed starts his football practice at 5:00.

Solution Method

If the activity happened before sunset, write "morning".
If the activity happened after sunset, write "evening".

1 morning | 2 evening | 3 evening | 4 evening

Example 4 Answer the following questions using "morning" or "evening":

1. What time is one hour after sunset? ....
2. What time is two hours before sunset? ....

Solution Method

To know the time (after), we use the addition operation,
and to know the time (before), we use the subtraction operation.

1	1:00 a.m.	Add 12:00 hours →	1:00 p.m.
2	10:00 a.m.	Subtract 12:00 hours →	10:00 p.m.

Try It 3 Complete by writing "morning" or "evening" in each of the following:

.... Youssef goes to bed at 7:00.
.... Kareem watches TV at 9:00.
.... Ahmed goes to the club at 4:30.
.... The first lesson starts at 8:00.

Challenge 4 Answer the following questions using "morning" or "evening":

1. What time is one hour before sunset? ....
2. What time is two hours after sunset? ....

Remember: Times before sunset are morning, and times after sunset are evening.

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Homework

1 Look at the activities in each picture and write "morning" or "evening":

(1) Brushing your teeth

....

(2) Playing in the garden

....

(3) Going to school

....

(4) Having lunch

....

(5) Watching TV

....

(6) Leaving school

....

(7) Doing homework

....

(8) Going to the club

....

2 Match the activities:

I wake up.

I go for a run.

morning

I have dinner.

I have breakfast.

evening

3 Complete by writing "morning" or "evening".

1. I have breakfast. ....
2. I go to the club. ....
3. I remember my lessons. ....
4. I go to bed. ....
5. I go to school after the club. ....
6. I return from work. ....
7. I go to school. ....
8. I have dinner. ....

4 Answer the following questions using "morning" or "evening".

1. What time is before sunset? ....
2. What time is after sunset? ....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

4 Telling the Time Using "Morning" and "Evening"

Look at the activities in each picture and write "morning" or "evening", then write the clock time shown:

1. Morning or Evening: ______
Time: ____ : ____

2. Morning or Evening: ______
Time: ____ : ____

3. Morning or Evening: ______
Time: ____ : ____

4. Morning or Evening: ______
Time: ____ : ____

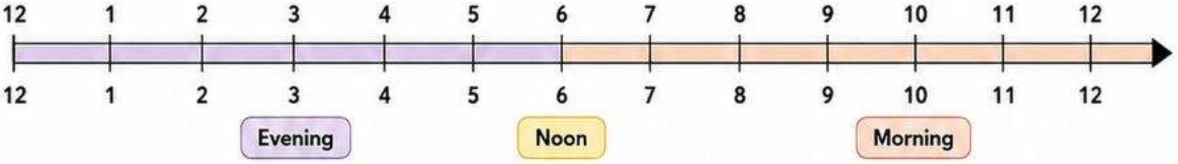
5 Complete by writing "morning" or "evening" as in the example:

Example Mohamed returns home at 5:00 p.m. → evening

1. Ali goes to school at 7:15 a.m. → ....
2. Dina goes to bed at 6:00 p.m. → ....
3. Ahmed has dinner at 7:30 p.m. → ....
4. Tamer sleeps at 9:00 p.m. → ....
5. Taha wakes up at 7:45 a.m. → ....
6. The school day ends at 2:30 p.m. → ....
7. The first lesson starts at 8:00 a.m. → ....

6 Look at the timelines below, then answer the questions:

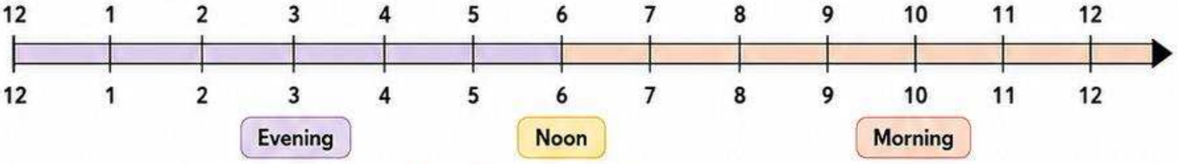
1 Leaving home — Returning home



a) Write the leaving home time using "morning" or "evening". - ______________

b) Write the returning home time using "morning" or "evening". - ______________

2 Arriving at school — Going back home



a) Write the arrival at school time using "morning" or "evening". - ______________

b) Write the time you go back home using "morning" or "evening". - ______________

c) How many hours from arriving at school until going home? - ______________ hours

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Test on Chapter 4

Telling the Time Using "Morning" and "Evening"

Name: ______________ Class: ______________ Date: ______________

1 Choose the correct answer:

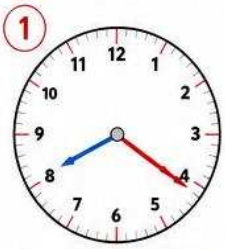
1. 1 hour and 10 minutes = ... minutes
2. 95 minutes = 1 hour and .... minutes
3. 1 day = ... hours
4. Goes to work at 9:00 = ...
5. Sunset = ... o'clock

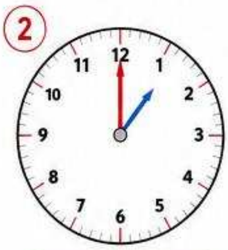
a) (90 , 80 , 70 , 60)
b) (45 , 35 , 25 , 15)
c) (30 , 60 , 12 , 24)
d) (morning , after noon , evening)
e) (5:00 a.m. , 12:00 noon , 5:30 p.m.)

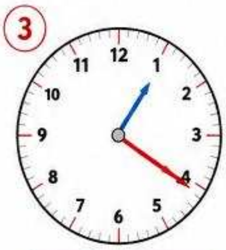
2 Complete the following using "morning" or "evening":

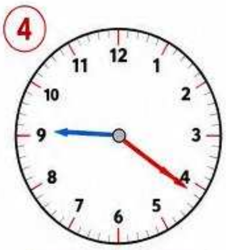
1. Go to school at (..................................)
2. Perform the evening prayer at (..............................)
3. Do the homework at (............................)
4. Take a school bus at (............................)

3 Write the time shown on each clock below:

1. 
___ : ___

2. 
___ : ___

3. 
___ : ___

4. 
___ : ___

5.
___ : ___

4 Look at the clocks and write the time according to the required time:

1. The time after 5 minutes.
....
2. The time before 15 minutes.
....

1. The time after 35 minutes.
....
2. The time before 20 minutes.
....

5 Look at the clocks and write the time duration according to the required:

1. The time duration until 4:25.
....
2. The time duration until 11:30.
....

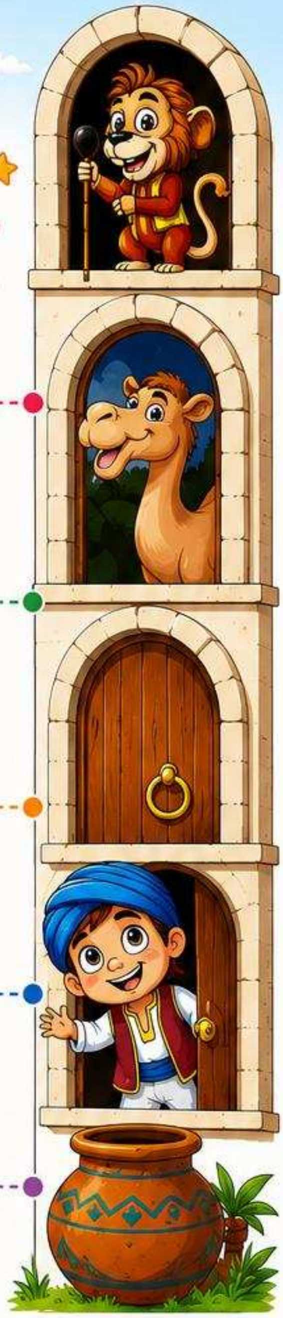
1. The time duration until 9:00.
....
2. The time duration until 5:00.
....

Remember: Times before noon (12:00 p.m.) are morning.
Times after noon (12:00 p.m.) are evening.

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

UNIT 5 LENGTH UNITS

OVERVIEW OF UNIT OBJECTIVES



1. LESSON OBJECTIVES
We will learn in this unit how to:

2. RECOGNIZE THE CENTIMETER
Write the lengths of objects using the centimeter (cm).

3. MEASURE THE LENGTHS OF OBJECTS
using the centimeter.

4. DISTINGUISH BETWEEN LENGTH UNITS
(**centimeter** and **meter**).

5. COMPARE LENGTHS
- Measure lengths by combining equal units.
- Compare lengths by combining equal units.

LESSON (1): LENGTH UNITS (PART 1)
- Recognize the centimeter.
- Write the lengths of objects using the centimeter.
- Measure the lengths of objects using the centimeter.

LESSON (3): LENGTH UNITS (PART 3)
- Recognize the centimeter.
- Write the lengths of objects using the centimeter.
- Measure the lengths of objects using the centimeter.

LESSON (2): LENGTH UNITS (PART 2)
- Recognize the centimeter.
- Write the lengths of objects using the centimeter.
- Distinguish between length units (**centimeter** and **meter**).

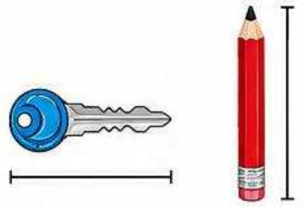
LESSON (4): COMPARING LENGTHS
- Measure lengths by combining equal units.
- Compare lengths by combining equal units.

REMEMBER: Lengths are usually measured in **centimeters** (cm) or **meters** (m).
Use **centimeters** to measure **small** things. Use **meters** to measure **long** things.

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

1 LENGTH UNITS (PART 1)

LESSON 1



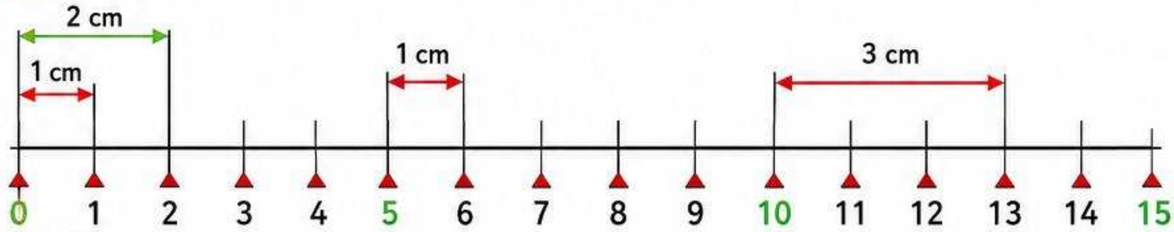
LEARN **Units for measuring length (the centimeter):**

The centimeter is a unit for measuring short lengths,
such as the length of a key or a pencil,
and it is written using the abbreviation "cm".

1 cm	1 cm	1 cm	1 cm

1 cm

OBSERVE THE FOLLOWING NUMBER LINE:

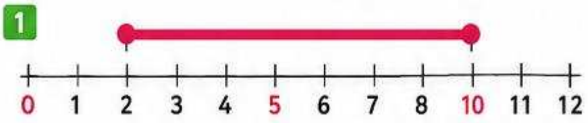


WE FIND THAT:

- The distance between any two consecutive points equals 1 centimeter.
- The distance from a number to the next number equals 1 centimeter.
- The distance from any number to a number 10 places ahead equals 10 centimeters.

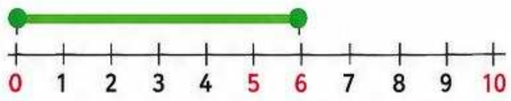
EXAMPLE 1 Write the length of each colored segment using the number line.

1



Length = ________ cm

2

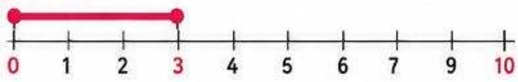


Length = ________ cm

SOLUTION METHOD

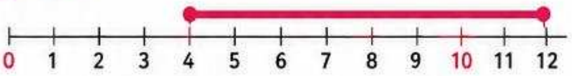
- Each part on the number line represents 1 cm.

1 3 cm



Length = ________ cm

2 8 cm



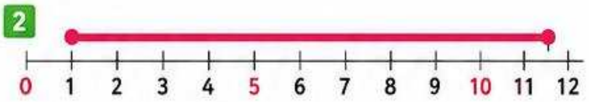
Length = ________ cm

TRY IT Write the length of each colored segment using the number line.

1

Length = ________ cm

2



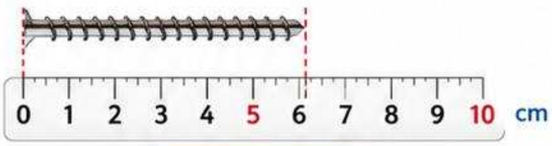
Length = ________ cm

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

EXAMPLE 2 Use the ruler to write the length of each object.

1

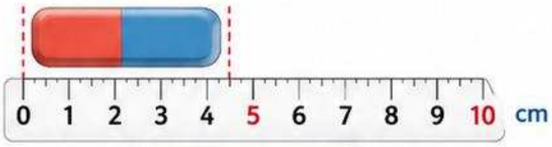
.... cm

2


.... cm

3

.... cm

4


.... cm

SOLUTION METHOD

Start from the number 0 on the ruler.

1 9 cm   2 7 cm   3 8 cm   4 4 cm

NOTE: A ruler is a tool used to measure the lengths of short objects.

EXAMPLE 3 Use the ruler to draw each line segment with the given length.

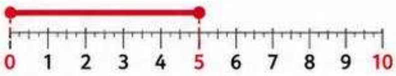
1 5 cm ....

2 3 cm ....

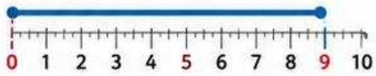
3 9 cm ....

SOLUTION METHOD

Place the ruler on the number line and draw a line from 0 to the given number.

1 5 cm


2 3 cm

3 9 cm


SOLUTION METHOD

Use the ruler to measure the length of each line segment.

1

= .... cm

2

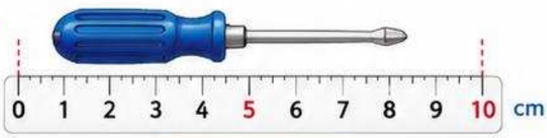
= .... cm

3

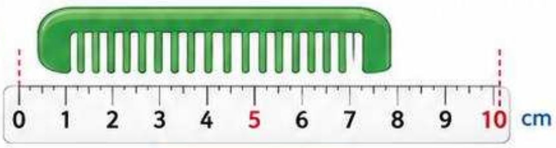
= .... cm

The **blue** line segment is the **longest** line.

TRY IT Use the ruler to write the length of each object.

1


.... cm

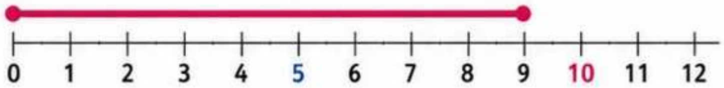
2


.... cm

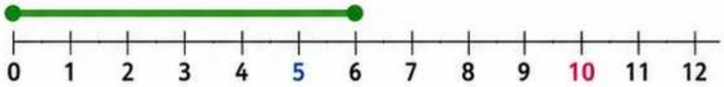
D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Homework

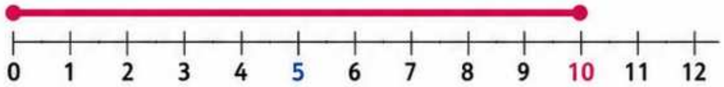
EXERCISE Write the length of each segment using the ruler (in cm). **1**

1.


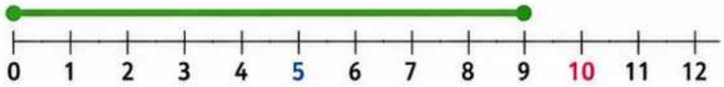
Length = ________ cm

2.


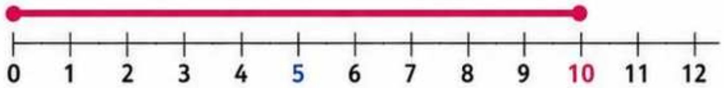
Length = ________ cm

3.


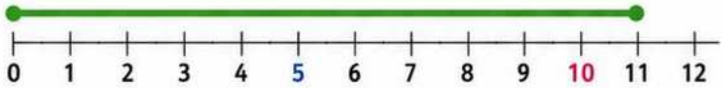
Length = ________ cm

4.


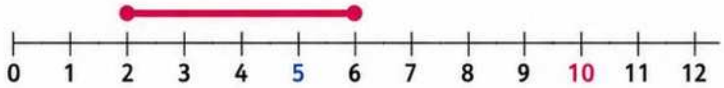
Length = ________ cm

5.


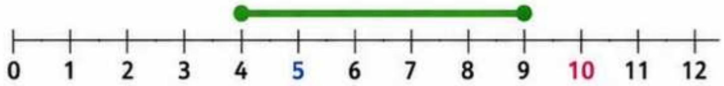
Length = ________ cm

6.


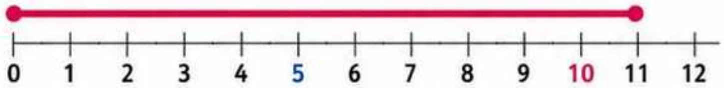
Length = ________ cm

7.


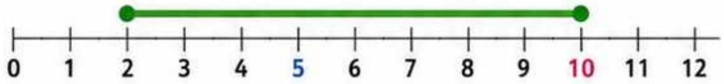
Length = ________ cm

8.


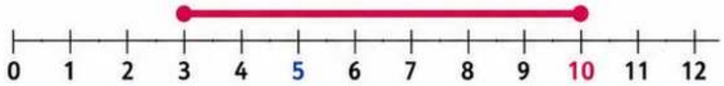
Length = ________ cm

9.


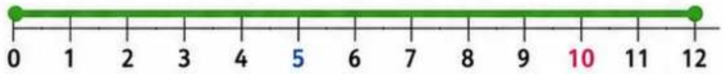
Length = ________ cm

10.


Length = ________ cm

11.


Length = ________ cm

12.


Length = ________ cm

REMEMBER: Each small space between two numbers on the ruler represents 1 cm.

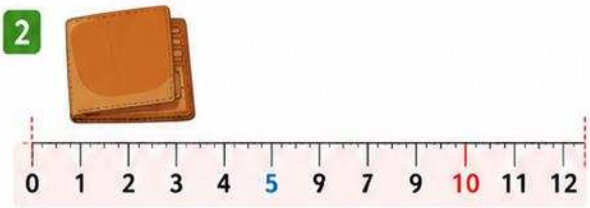
D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

2 Use the ruler to write the length of each object.

1

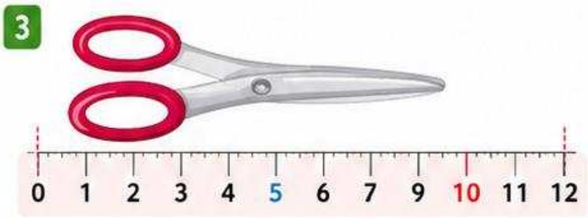
Length = ________ cm ☆

2



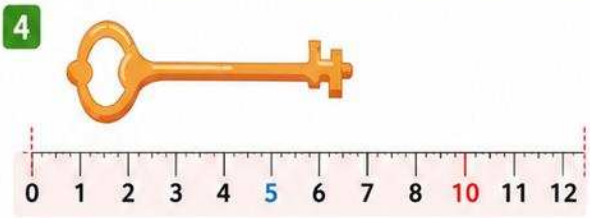
Length = ________ cm ☆

3



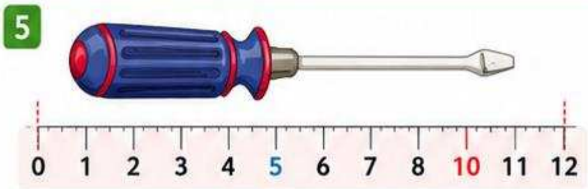
Length = ________ cm ☆

4



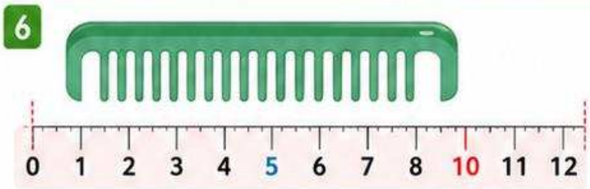
Length = ________ cm ☆

5



Length = ________ cm ☆

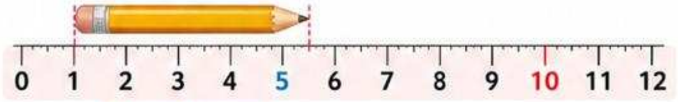
6



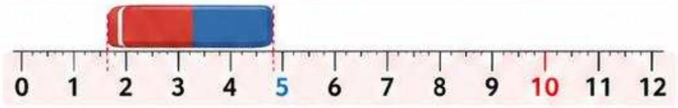
Length = ________ cm ☆

3 Match each object with its correct length.

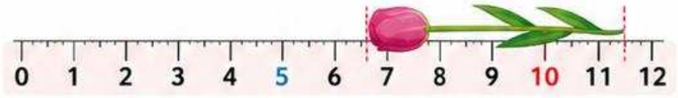
- 8 cm •
- 9 cm •
- 4 cm •
- 3 cm •
- 5 cm •
- 10 cm •

• 

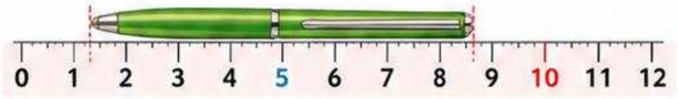
1

• 

2

• 

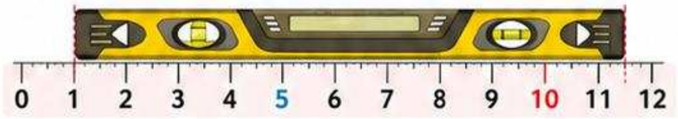
3

• 

4

•

5

• 

6

REMEMBER: Each small space between two numbers on the ruler represents 1 centimeter (1 cm).

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Mark your score

Lesson 1 Test Yourself

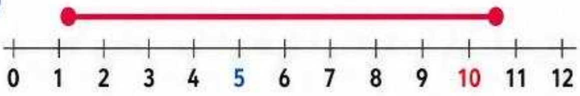
1 Choose the correct answer:

1. 23 + 15 = ... + 23 (8 , 38 , 33 , 15)
2. The problem used to check the answer of 15 – 7 = 8 is ....
   (1 = 7 – 8 , 33 = 15 + 8 , 22 = 15 + 7 , 15 = 7 + 8)
3. The length ________ is ________ cm.
   (6 , 5 , 4 , 3)
4. The tool used to measure length is .... (the pencil , the scissors , the ruler , the eraser)

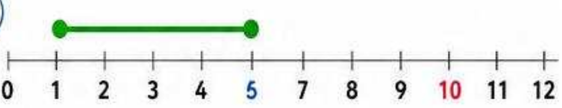
2 Find the result:

① .... = 34 + 25	② .... = 42 + 39	③ .... = 9 + 20
④ .... = 8 + 72	⑤ .... = 17 + 40	⑥ .... = 18 + 22
⑦ .... = 28 – 91	⑧ .... = 23 – 75	⑨ .... = 16 – 36
⑩ .... = 9 + 20	⑪ .... = 43 – 50	⑫ .... = 5 – 70

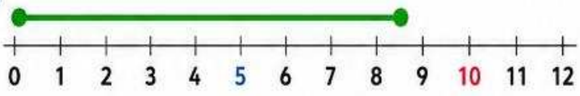
3 Write the length of each segment using the ruler (in cm):

1. 

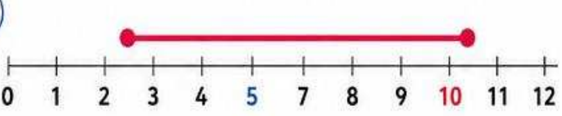
Length = ________ cm ☆

2. 

Length = ________ cm ☆

3. 

Length = ________ cm ☆

4. 

Length = ________ cm ☆

4 Measure the lengths of the following objects, then arrange them from the shortest to the longest:

3.
.... cm

2.
.... cm

1.
.... cm

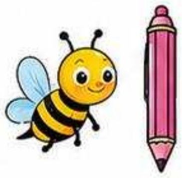
The order is: .... cm < .... cm < .... cm

Remember: Each small space between two numbers on the ruler represents 1 cm.

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

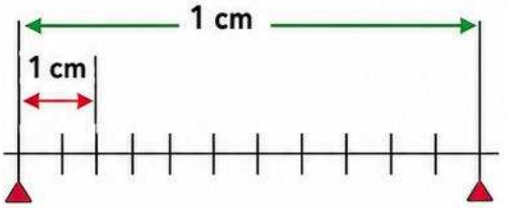
UNIT 5 Length Units (Part 2) Lesson 2

Learn: Units for measuring length (centimeter)



Centimeter: a unit used to measure the lengths of very short objects. For example, we measure the age of a child or the length of an insect, and write the measurement in centimeters (cm).

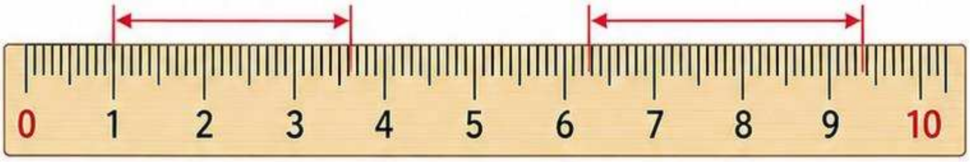
.... cm .... cm .... cm .... cm | 1 cm



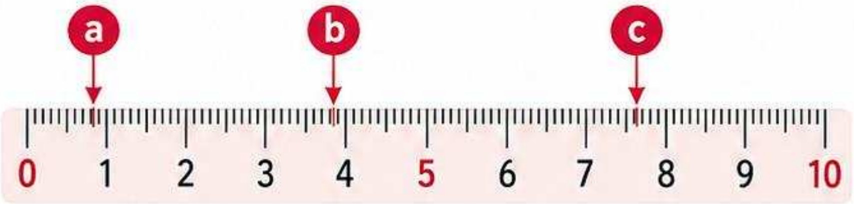
- The centimeter is divided into 10 equal parts. Each part (the distance between two short marks) equals 1 centimeter.
- That is: 1 cm = 10 mm

You can place the centimeter and millimeter on the ruler as follows:

2 cm 8 mm = 8 parts from 1 cm   3 cm 5 mm = 5 parts from 3 cm



Example 1 Write the lengths of the red arrows (a), (b) and (c) on the ruler:



a = ... cm   b = ... cm   c = ... cm

Solution

How to solve:

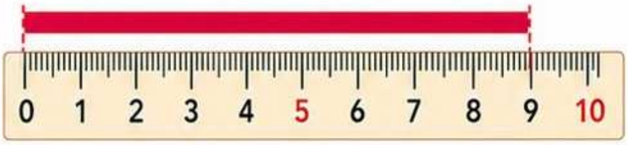
a) 8 parts from 1 cm = 8 mm ⟶ 8 mm = 0.8 cm

b) 3 cm and 2 parts from 1 cm ⟶ 3 cm 2 mm = 3.2 cm

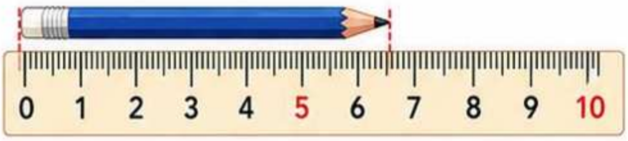
c) 7 cm and 4 parts from 1 cm ⟶ 7 cm 4 mm = 7.4 cm

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Example 2 Write the length of each object using centimeters and millimeters:

1


.... cm .... mm

2


.... cm .... mm

3

.... cm .... mm

How to solve:

3 6 cm 8 mm   2 5 cm 3 mm   1 8 cm 5 mm

Example 3 Complete by writing the appropriate unit (cm or mm) for each length:

1 .... = 15 length of a pencil
3 .... = 8 length of a phone
2 .... = 6 length of a nail
4 .... = 4 length of an eraser

How to solve:

We use the unit centimeter to measure the lengths of long objects, and the unit millimeter to measure the lengths of very short objects.

1 15 cm   2 8 mm   3 4 cm

Try It Complete by writing the appropriate unit (cm or mm) for each length:

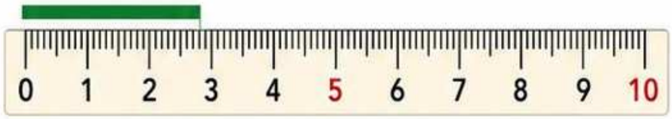
1 .... = 18 length of a paper clip
3 .... = 6 length of a small insect
2 .... = 3 length of a coin
4 .... = 4 length of a notebook

Remember: Each small space between two numbers on the ruler represents 1 mm.

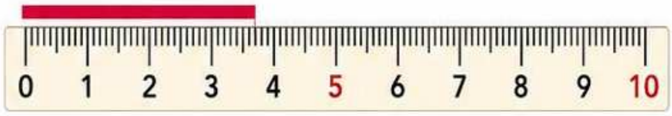
D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Homework

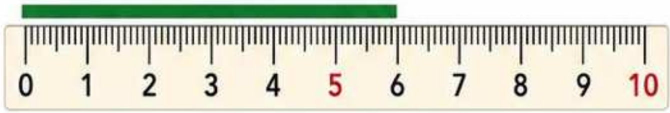
Exercise 1 Write the length of each line segment using centimeters and millimeters.

1


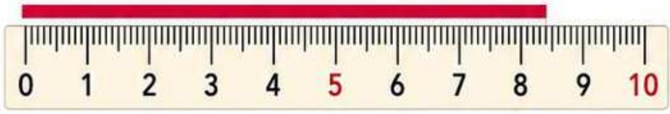
Length = ______ cm ______ mm

2


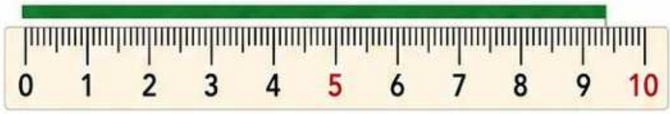
Length = ______ cm ______ mm

3


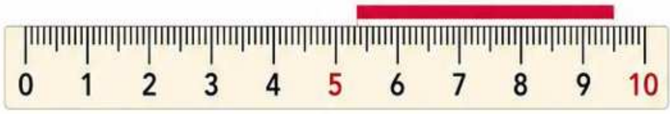
Length = ______ cm ______ mm

4


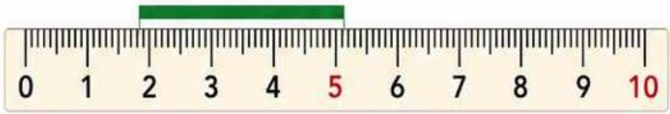
Length = ______ cm ______ mm

5


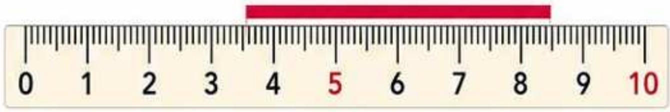
Length = ______ cm ______ mm

6


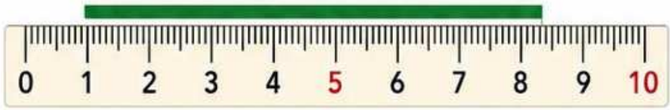
Length = ______ cm ______ mm

7


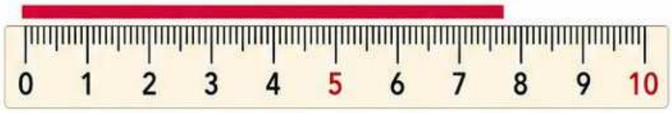
Length = ______ cm ______ mm

8


Length = ______ cm ______ mm

9


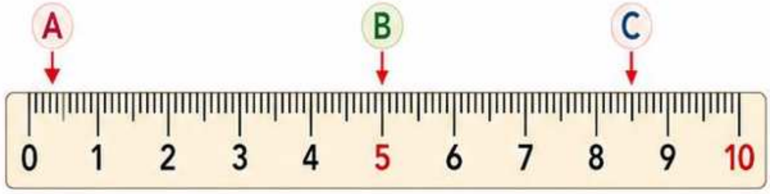
Length = ______ cm ______ mm

10


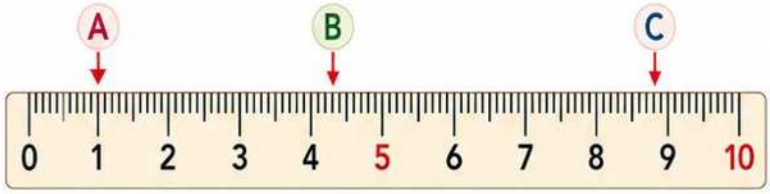
Length = ______ cm ______ mm

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

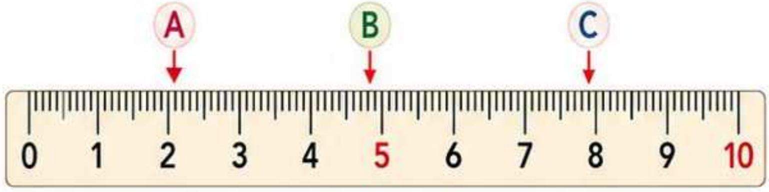
Exercise 3 Write the lengths of the line segments from point A, B and C on the right:



1
A = ______ cm ______ mm
B = ______ cm ______ mm
C = ______ cm ______ mm



2
A = ______ cm ______ mm
B = ______ cm ______ mm
C = ______ cm ______ mm



3
A = ______ cm ______ mm
B = ______ cm ______ mm
C = ______ cm ______ mm

Exercise 4 Choose the appropriate unit (cm or mm) to measure the length of each object below.

1

cm | mm

2

cm | mm

3

cm | mm

4

cm | mm

5

cm | mm

6

cm | mm

7

cm | mm

8

cm | mm

9

cm | mm

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

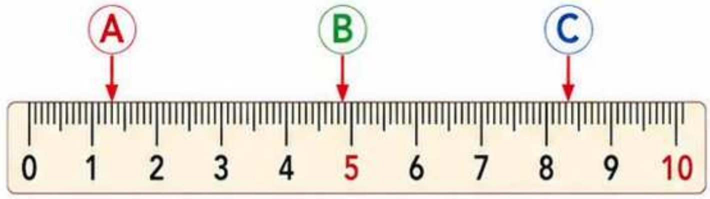
Work on your own

2 Up to Lesson — Test Yourself

1 Complete the following:

1. 25 + 12 = ________
2. 68 + 15 = ________
3. 59 – 27 = ________
4. 9 – 7 = ________
5. 13 + 20 = ________
6. 60 – 50 = ________

2 Write the lengths from the ruler to the right of each letter A, B, and C:



A = ________ cm ______ mm

B = ________ cm ______ mm

C = ________ cm ______ mm

3 Measure the following lines. Then write the length of each line.

A Length = ________ cm

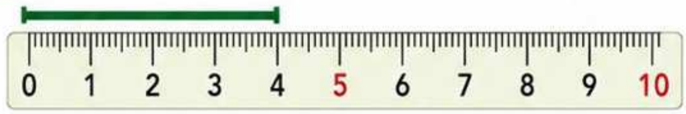
B Length = ________ cm

C Length = ________ cm

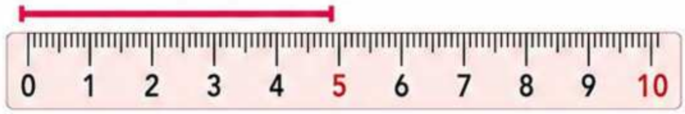
D Length = ________ cm

The longest line is ____________________

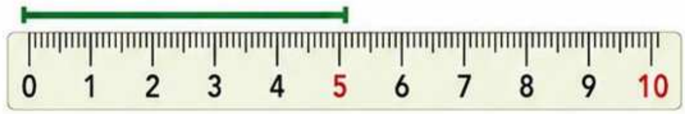
4 Write the length of each line using the ruler below:



1. Length = ______ cm ______ mm



2. Length = ______ cm ______ mm



3. Length = ______ cm ______ mm

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Lessons 3, 4

Units of Length (Part 3)

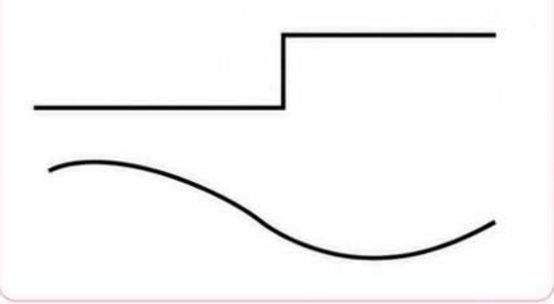
- Straight Lines and Non–straight Lines
- How to Draw a Line Segment Accurately

3, 4 Lessons

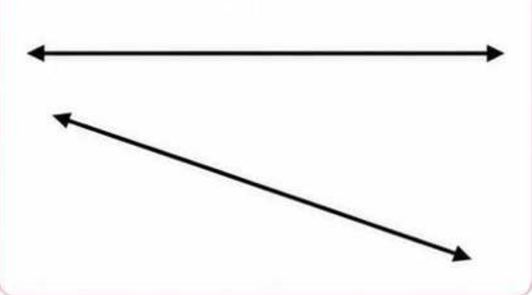
1 Learn

Straight lines, non–straight lines:

Non–straight lines



Straight lines



- Non–straight lines cannot be measured using a ruler.

Note

2 Example

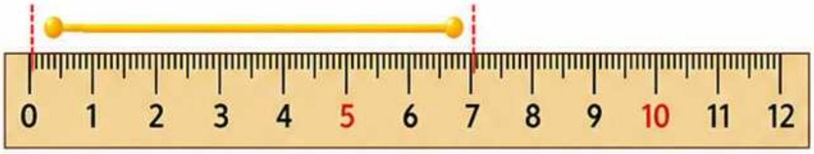
Write the length of each line segment using centimeters and millimeters:

2

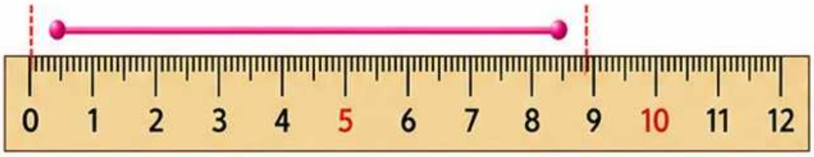
1

How to solve Follow these steps:

- ☆ Place each line on the ruler.
- Use the number scale on the ruler.
- Write the length.



1 The length is _______ cm ______ mm.

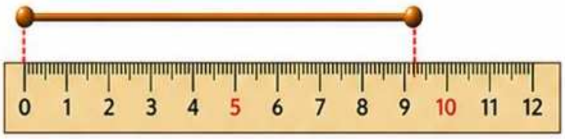


2 The length is _______ cm ______ mm.

3 Solve ✓

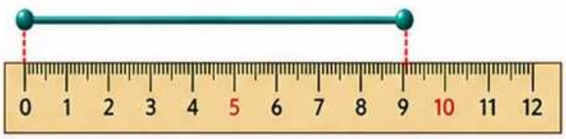
Write the length of each line segment using centimeters and millimeters:

1



Length = _______ cm ______ mm.

2



Length = _______ cm ______ mm.

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Lesson 2 — Expressing Lengths in Centimeters and Millimeters

Learn

1 centimeter = 10 millimeters (1 cm = 10 mm) — Write in short
1 millimeter = $\frac{1}{10}$ centimeter (1 mm = $\frac{1}{10}$ cm)

Examples:
- 50 mm = 5 cm
- 70 mm = 7 cm
- 100 mm = 10 cm

1 Example — Complete the following:

1. 4 cm = ______ mm
2. 8 cm = ______ mm
3. 20 mm = ______ cm
4. 90 mm = ______ cm
5. 6 cm 2 mm = ______ mm
6. 8 cm 7 mm = ______ mm
7. 38 mm = ______ cm ______ mm
8. 46 mm = ______ cm ______ mm

Solution method

1 centimeter = 10 millimeters

When converting from cm to mm	When converting from mm to cm
Multiply by 10	Divide by 10
1. 4 cm = 40 mm	3. 20 mm = 2 cm
2. 8 cm = 80 mm	4. 90 mm = 9 cm

When expressing mm as cm and mm:
Divide by 10 → the quotient is the cm, and the remainder is the mm.

2 Solve — Complete the following:

1. 40 mm = ______ cm
2. 80 mm = ______ cm
3. 20 cm = ______ mm
4. 100 mm = ______ cm
5. 6 cm 2 mm = ______ mm
6. 8 cm 7 mm = ______ mm
7. 38 mm = ______ cm ______ mm
8. 46 mm = ______ cm ______ mm

Solution method

When converting from cm to mm	When converting from mm to cm
Multiply by 10	Divide by 10

When expressing mm as cm and mm:
Divide by 10 → the quotient is the cm, and the remainder is the mm.

3 Check — Complete the following:

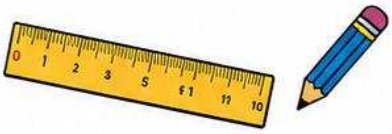
1. 2 cm = ______ mm
2. 70 mm = ______ cm
3. 28 mm = ______ cm ______ mm
4. 28 mm = ______ cm ______ mm
5. 50 mm = ______ cm
6. 5 cm 9 mm = ______ mm
7. 9 cm ______ mm = ______ mm
8. ______ cm ______ mm = 28 mm

Remember
- 1 cm = 10 mm
- To convert from cm to mm: multiply by 10
- To convert from mm to cm: divide by 10
- The remainder is the mm.

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Learn 3

Drawing Lines



⭐ We use a ruler to draw a line of a given length.

Example We can draw a line of length **6 cm** by following these steps:

STEP 1

Mark the starting point.

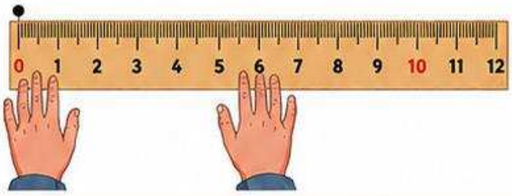
⭐ Choose a point to be the starting point.

Draw the starting point.

STEP 2

Place the ruler at the starting point on the number line.

⭐ Put the ruler so that the zero (0) mark coincides with the starting point.

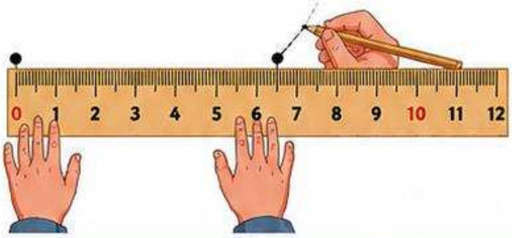


Draw the ruler at the starting point.

STEP 3

Mark the ending point at the number 6 on the ruler.

⭐ Mark the point that represents 6 cm.

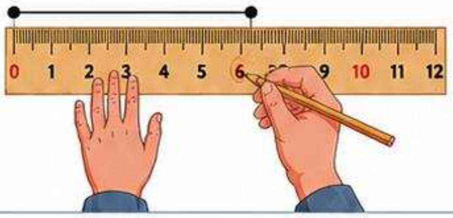


Mark the ending point at 6 cm.

STEP 4

Draw a line between the two points to get a line of length 6 cm.

⭐ Join the two points with a straight line.



Draw the line of length 6 cm.

Remember

- 1 cm = 10 mm
- To convert from cm to mm: multiply by 10.
- To convert from mm to cm: divide by 10.
- The remainder is the mm.

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Example 3 Draw Lines of the Following Lengths

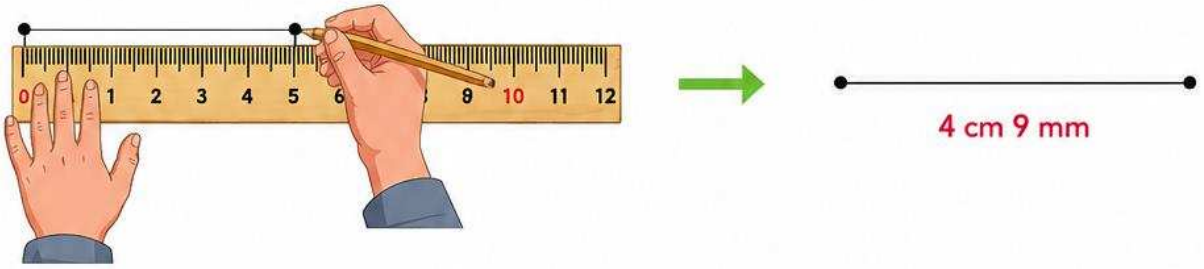
Example 3 Draw lines of the following lengths:

1. 4 cm 9 mm
2. 7 cm 5 mm

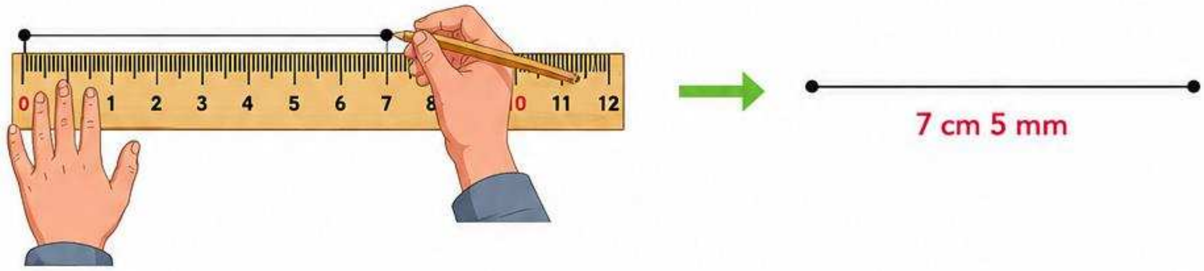
Solution Method

☆ Mark the starting point, then place the ruler and determine the end point for the required length, then join the two points with a straight line.

1 4 cm 9 mm



2 7 cm 5 mm



Practice 3 Draw lines of the following lengths: **Solve**

1. 8 cm 9 mm
2. 6 cm 3 mm
3. 3 cm 5 mm
4. 6 cm 4 mm

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

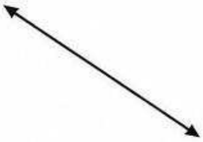
Lesson 3

Straight Lines and Non-Straight Lines

1 Put a (✓) under the straight line in each of the following:

①
(   )

②
(   )

③ 
(   )

④
(   )

⑤
(   )

⑥
(   )

2 Write the length of each line below in centimeters and millimeters:

①
Length = ______________

②
Length = ______________

③
Length = ______________

④
Length = ______________

⑤
Length = ______________

⑥
Length = ______________

3 Join each line to the box that shows its length:

①

②

③

5 cm 3 mm	4 cm	3 cm 3 mm

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

4 Complete the following:

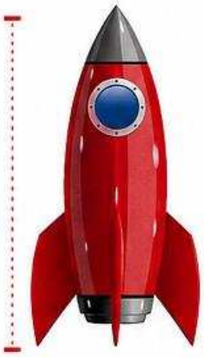
1. .... cm = 📖 mm
2. 3 cm = ... mm
3. 6 cm = ... mm
4. 9 📖 mm = ... cm
5. 10 cm = ... mm
6. 50 mm = ... cm
7. 70 📖 mm = ... cm
8. 300 mm = ... cm
9. 6 cm 6 mm = ... mm
10. 6 cm 6 mm = ... cm
11. 8 cm 1 mm = ... mm
12. 39 mm = ... cm .... mm
13. 47 mm = ... cm .... mm
14. 98 mm = ... cm .... mm

5 Write the length of each object below in centimeters and millimeters as in the example:

(3)

.... cm | .... mm

(2)

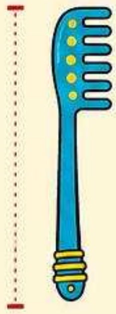


.... cm | .... mm

(1)

.... cm | .... mm

Example



4 cm | 40 mm

6 Connect each item with the matching length:

(1) 30 mm (2) 60 mm (3) 40 mm (4) 80 mm

10 cm • 6 cm • 64 mm • 3 cm • 90 mm • 4 cm • 81 mm • 8 cm

(5) 100 mm (6) 90 mm (7) 8 cm 1 mm (8) 6 cm 4 mm

6 cm 4 mm • 8 cm 1 mm • 9 cm • 100 mm

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Your Stamp

4 End of Lesson

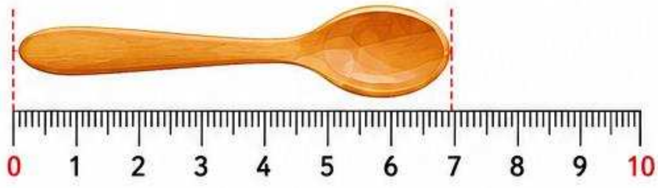
Test Yourself

1 Complete the following:

1. 8 cm = ... mm
2. 2 cm 5 mm = ... mm
3. 50 mm = ... cm
4. 94 mm = ... cm .... mm
5. 10 cm = ... mm
6. .... + 21 = ... + 35
7. 70 mm = ... cm
8. 6 cm 9 mm = ... mm
9. 6 cm 6 mm = ... cm
10. 9 cm = ... mm
11. 8 cm 1 mm = ... mm

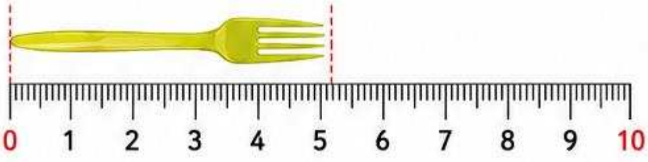
2 Write the length of each of the following in centimeters and millimeters:

(1)



Length = ... cm .... mm

(2)



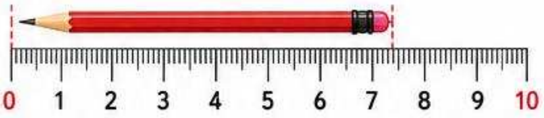
Length = ... cm .... mm

3 Write the length of each of the following in millimeters:

(1)

Length = ... millimeters

(2)



Length = ... millimeters

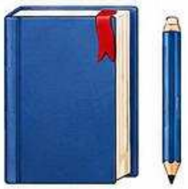
(3)

Length = ... millimeters

(4)

Length = ... millimeters

4 Read the problem, then write the arithmetic operation and the answer:



Ahmed read 15 pages of a book and wrote a summary of 69 pages.
What is the total number of pages he read and wrote?

☆ Arithmetic operation: ....

☆ Answer: ....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

1 Example 2 **Compare between the lengths of the lines and write (> , < , =) in between:**

ⓐ

☐

ⓑ

☐

Solution Method

★ Length of line a: 7 cm + 3 cm 3 mm = 10 cm 5 mm

(7 cm + 3 cm = 10 cm)

★ Length of line b: 4 cm + 6 cm = 10 cm

★ Length of line a is longer than line b (because 10 cm 5 mm > 10 cm).

2 Example 3 **Look at the lines below, then answer the questions:**

ⓐ

ⓑ

1. What is the length of line a? ______________
2. What is the length of line b? ______________
3. Which line is longer? ______________

What is the difference between them? ______________

Solution Method

★ Length of line a = 5 cm + 3 cm 9 mm = 8 cm 9 mm

(10 cm)

★ Length of line b = 4 cm + 4 cm = 8 cm

★ Line a is longer than line b (8 cm 9 mm is longer than 8 cm).

★ The difference between the two lines = 8 cm 9 mm − 8 cm = **9 mm**

3 Example 4 **Look at the lines below, then answer the questions:**

1. Length of line a = 6 cm + 4 cm = 10 cm
2. Length of line b = 3 cm 7 mm + 5 cm 8 mm = 8 cm 7 mm + 5 cm 8 mm

   = 8 cm 7 mm + 8 mm
3. Length of line b (8 cm 15 mm) is longer than line a (10 cm).
4. The difference between line b and line a = 8 cm 15 mm − 10 cm = 7 mm

4 Solve Compare between the lengths of the lines and write (> , < , =) in between:

ⓐ

☐

....

ⓑ

☐

....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Lesson 5

Calculating Lengths

Name: ____________

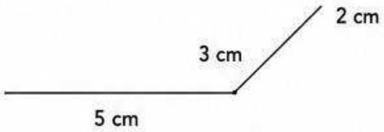
1 Add the following lengths.

1. 3 cm 5 mm + 0 cm 5 mm = ________
2. 15 cm + 5 cm = ________
3. 2 cm 3 mm + 4 cm = ________
4. 7 mm + 7 mm = ________
5. 7 cm + 8 cm 8 mm = ________
6. 2 cm 7 mm + 7 cm 8 mm = ________
7. 7 mm 5 mm + 0 cm 4 mm = ________
8. 3 cm 7 mm + 13 mm 5 mm = ________
9. 3 cm 7 mm + 7 cm 2 mm = ________
10. 5 cm 5 mm + 0 cm 4 mm = ________
11. 6 cm 10 mm + 2 cm 9 mm = ________
12. 7 cm 2 mm + 9 cm 1 mm = ________

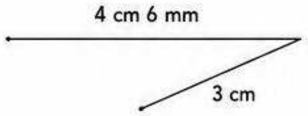
2 Subtract the following lengths.

1. 5 cm − 2 cm = ________
2. 9 cm − 4 cm = ________
3. 6 cm − 2 cm 4 mm = ________
4. 12 cm − 8 cm = ________
5. 12 cm − 6 cm 9 mm = ________
6. 21 cm 5 mm − 7 cm 9 mm = ________
7. 17 cm 3 mm − 8 cm 3 mm = ________
8. 8 cm − 3 cm 8 mm = ________
9. 8 cm 9 mm − 4 cm = ________
10. 3 cm 6 mm − 3 cm = ________
11. 13 cm 7 mm − 7 cm 5 mm = ________
12. 15 cm 8 mm − 8 cm 6 mm = ________

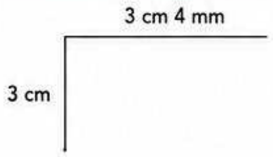
3 Choose the length that matches each shape.

1.


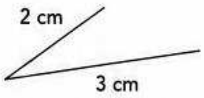
10 cm 5 mm | 13 cm 2 mm | 7 cm 3 mm | 6 cm 4 mm

2.


9 cm | 7 cm 6 mm | 10 cm 6 mm | 6 cm 10 mm

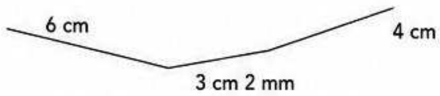
3.


6 cm | 7 cm 4 mm | 6 cm 4 mm | 4 cm 6 mm

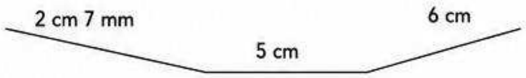
4.


5 cm | 5 cm 0 mm | 23 mm | 3 cm 5 mm

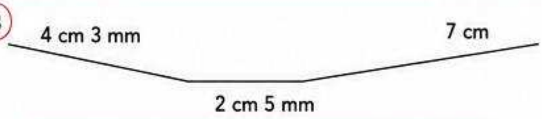
4 Find the total length of each broken line.

1.


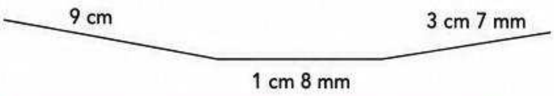
Total length = ____________

2.


Total length = ____________

3.


Total length = ____________

4.


Total length = ____________

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Unit 5

Test on Unit 5

Name: ____________

1 Choose the correct answer:

a (100 , 60 , 55 , 50)

b (25 , 9 , 59 , 34)

c (50 , 35 , 25 , 45)

d (19 , 9 , 90 , 99)

e (6 cm 2 mm , 2 cm 6 mm , 20 mm 6 mm)

f (8 cm 5 mm , 11 cm 9 mm , 8 cm 9 mm)

1. One hour = ________ minutes.
2. 25 + ________ = 34 + 25
3. 95 minutes = ________ hour and ________ minute.
4. 90 mm = ________ cm
5. ________ = 26 cm
6. 6 cm 5 mm + 4 cm = ________

2 Circle the longest length in each set:

1. 6 cm , 7 cm , 90 mm
2. 7 cm , 3 cm 9 mm , 3 cm 7 mm
3. 16 mm , 5 cm , 6 cm
4. 3 cm 4 mm , 4 cm 3 mm , 3 cm 3 mm
5. 7 cm 5 mm , 8 cm , 7 cm 8 mm
6. 7 cm 9 mm , 5 cm 9 mm , 8 cm 7 mm

3 Find the result of each of the following:

1.

5	6	
1	2	+
....	....	

2.

6	6	
2	7	+
....	....	

3.

3	4	
2	3	−
....	....	

4.

4	6	
3	8	−
....	....	

4 Look at the clock and answer the following:

1. What is the time 15 minutes past?
____

2. What was the time 10 minutes before?
____

3. How long is the period of time from 8:50 to 12:00?
____

4. How long is the period of time from 12:00 to 8:50?
____

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

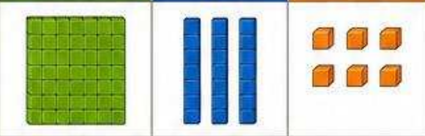
CHAPTER 6
NUMBERS GREATER THAN 100

LESSON OBJECTIVES

By the end of this chapter, the student will be able to:

- Collects numbers that are made up of 3 digits.
- Writes the number with its place value and digit cards.
- Reads the number in expanded form.

PLACE VALUE EXAMPLE



Hundreds	Tens	Ones
2	3	7

→ 2 3 7

EXPANDED FORM
200 + 30 + 7

REMEMBER

The place value of each digit depends on its position.

- Hundreds place (100)
- Tens place (10)
- Ones place (1)

LESSON OUTLINE

1 Lesson 1: Numbers greater than 100 (Part 1)
- Reads and writes 3-digit numbers.
- Writes the number in expanded form.
- Reads the number using its place value and digit cards.

2 Lesson 2: Numbers greater than 100 (Part 2)
- Reads and writes 3-digit numbers.
- Writes the number in expanded form.
- Reads the number in expanded form.

3 Lesson 3: Numbers greater than 100 (Part 3)
- Reads and writes 3-digit numbers.
- Represents 3-digit numbers using hundreds, tens and ones.
- Writes the number in expanded form.

4 Lesson 4: Numbers greater than 100 (Part 4)
- Reads the number on the place value chart.
- Represents the 3-digit number using hundreds, tens and ones.

5 Lesson 5: Numbers greater than 100 (Part 5)
- Reads the number on the place value chart.
- Writes the number using the expanded form.
- Compares the 3-digit numbers using (<, >, =).
- Orders the 3-digit numbers from greatest to least.
- Orders the 3-digit numbers using symbols.

7 Lesson 7: Numbers greater than 100 (Part 7)
- Collects numbers that are made up of 3 digits.
- Represents the number using hundreds, tens and ones.
- Writes the number in expanded form.
- Writes the number in an additive form.

8 Lesson 8: Numbers greater than 100 (Part 8)
- Reads the number on place value chart.
- Writes the number using hundreds, tens and ones.
- Writes the number in expanded form.

9 Lesson 9: Numbers greater than 100 (Part 9)
- Reads the number using its place value and digit cards.
- Writes the number on the place value chart.
- Compares 3-digit numbers using the symbols (<, >, =).
- Orders the 3-digit numbers from greatest to least.
- Orders the 3-digit numbers on the place value chart.

TIP: Always start from the hundreds place, then tens, then ones.

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Lesson 1 — Numbers Greater Than 100 (Part 1)

Learn Numbers greater than 100

1 Numbers formed from 3 digits:

Numbers formed from 3 digits

- ☆ The numbers 100 and 20 make the number 120.
  Read: one hundred and twenty.
- ☆ The numbers 100 and 100 make the number 200.
  Read: two hundred.
- ☆ The numbers 200, 40 and 6 make the number 246.
  Read: two hundred and forty-six.
- ☆ The numbers 100, 30 and 5 make the number 135.
  Read: one hundred and thirty-five.

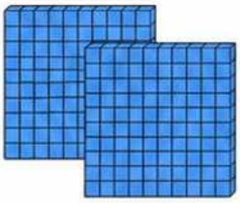
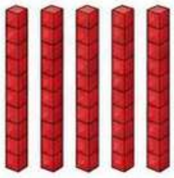
2 Represent the number formed from 3 digits:

Example: The number 256 can be represented in two ways:

Using place value cards

Hundreds house	Tens house	Ones house
100 100	10 10 10 10 10	1 1 1 1 1 1
2	5	6

Using base-ten models

Hundreds house	Tens house	Ones house
		
2	5	6

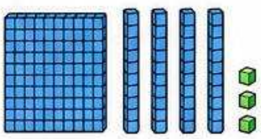
By looking at the previous representations, we find that:

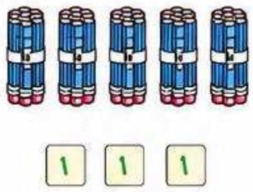
- ☆ The digit 6 is in the ones house.
- ☆ The digit 5 is in the tens house.
- ☆ The digit 2 is in the hundreds house.

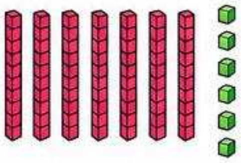
☆ Therefore, the number 256 is formed from 2 hundreds, 5 tens and 6 ones.

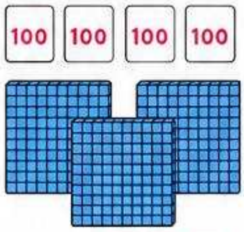
D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

1 Example 1 Write the number that each set of base-ten blocks represents.

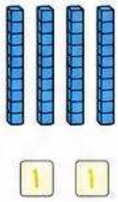
1

Number = ☐☐☐

2

Number = ☐☐☐

3

Number = ☐☐☐

4


Number = ☐☐☐

5

Number = ☐☐☐

Solution Method ☆ We start by counting hundreds, tens and ones.

▦ = 100 (one hundred) | ▮ = 10 (ten) | ◼ = 1 (one)

2 Example 2 Start from the hundreds, then the tens, then the ones to represent each number.

1. 164 → (1 hundred, 6 tens, 4 ones) — ________ hundreds, ________ tens, ________ ones
2. 432 → (4 hundreds, 3 tens, 2 ones) — ________ hundreds, ________ tens, ________ ones
3. 387 → (3 hundreds, 8 tens, 7 ones) — ________ hundreds, ________ tens, ________ ones

3 Read the following numbers, then write the hundreds digit, tens digit and ones digit.

1. 234

Hundreds	Tens	Ones
....	....	....

2. 521

Hundreds	Tens	Ones
....	....	....

3. 819

Hundreds	Tens	Ones
....	....	....

4. 733

Hundreds	Tens	Ones
....	....	....

Solution Method ☆ Read the number: hundreds digit, then tens digit, then ones digit.

1. 234 → two hundred thirty-four

4 Write the following numbers in digits.

1. Four hundred twenty-six = ____________
2. Six hundred ten = ____________
3. One hundred seventy-eight = ____________
4. Eight hundred four = ____________

5 Write the following numbers in words.

1. 375 = ______________________________
2. 516 = ______________________________
3. 240 = ______________________________
4. 698 = ______________________________

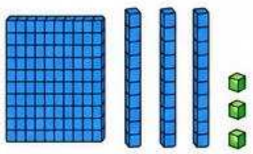
Challenge ✔ Write the following numbers in digits.

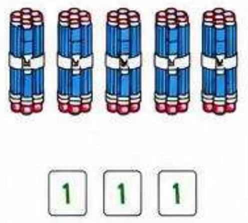
1. Five hundred seventy-two = ____________
2. Six hundred thirteen = ____________

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

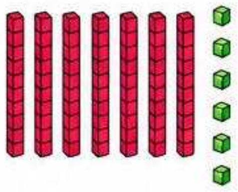
Homework

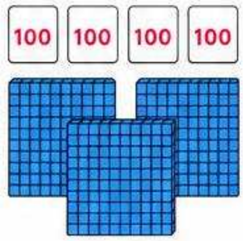
1 Write the number that each set of base-ten blocks represents.

1

Number = ☐☐☐

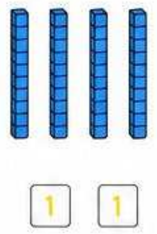
2


Number = ☐☐☐

3

Number = ☐☐☐

4


Number = ☐☐☐

5


Number = ☐☐☐

Remember ☆ We start by counting hundreds, tens and ones.

▦ = 100 (one hundred) | = 10 (ten) ◻ = 1 (one)

2 Start from the hundreds, then the tens, then the ones to represent each number.

1. 164 → (1 hundred, 6 tens, 4 ones) ______ hundreds, ______ tens, ______ ones
2. 432 → (4 hundreds, 3 tens, 2 ones) ______ hundreds, ______ tens, ______ ones
3. 387 → (3 hundreds, 8 tens, 7 ones) ______ hundreds, ______ tens, ______ ones

3 Read the following numbers, then write the hundreds digit, tens digit and ones digit.

1 234

Hundreds	Tens	Ones
____	____	____

2 521

Hundreds	Tens	Ones
____	____	____

3 819

Hundreds	Tens	Ones
____	____	____

4 733

Hundreds	Tens	Ones
____	____	____

Remember ☆ Read the number: hundreds digit, then tens digit, then ones digit.

1. 234 → two hundred thirty-four

4 Write the following numbers in digits.

1. Four hundred twenty-six = ____________
2. Six hundred ten = ____________
3. One hundred seventy-eight = ____________
4. Eight hundred four = ____________

5 Write the following numbers in words.

1. 375 = ______________________
2. 516 = ______________________
3. 240 = ______________________
4. 698 = ______________________

Challenge ✓ Write the following numbers in digits.

1. Five hundred seventy-two = ____________
2. Six hundred thirteen = ____________

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

LESSON 1

TEST ON LESSON 1
Numbers Greater Than 100

Name: ____________________

Class: ____________________

Date: ____________________

1 Complete the following.

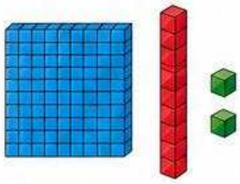
(1) Write the number **254** in words.

____

(2) Write in digits:

Five hundred and forty-six = [   ]

(3) Write the number represented by the base-ten blocks.



Hundreds = [   ]

Tens = [   ]

Ones = [   ]

Number = [   ]

(4) 1 hour and 25 minutes = _______ minutes.

(5) Three groups of 100 make the number _______.

2 Match.

Draw a line to match each number in words with the correct numeral.

Number in Words	Numeral
(1) Eight hundred and twenty-four •	• 172
(2) Five hundred and twenty-three •	• 824
(3) Eight hundred and fifty-three •	• 653
(4) Nine hundred and fifteen •	• 375
(5) One hundred and seventy-two •	• 915
(6) Six hundred and fifty-three •	• 523

3 Find the answer.

(1) 65 + 14 = [   ]

(2) 75 + 16 = [   ]

(3) 26 + 54 = [   ]

(4) 14 + 9 = [   ]

(5) 25 + 50 = [   ]

(6) 28 − 15 = [   ]

(7) 47 − 29 = [   ]

(8) 55 − 25 = [   ]

(9) 45 − 43 = [   ]

4 Solve the word problems.

(1)

Mohamed bought **12** footballs, then bought **19** more footballs.

How many footballs does he have altogether?

Solution:
____
____

Answer: ______________________________

(2)

Karim has **58** pounds.
Saeed has **87** pounds.

How much more money does Saeed have than Karim?

Solution:
____
____

Answer: ______________________________

★ GOOD LUCK! ★

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

3.2 Lesson Numbers greater than 100 (Part 2) Numbers greater than 100 (Part 3)

Learn
Adding numbers greater than 100

1 Write the numbers formed from 3 digits with tens in the ones place:

The numbers formed from 3 digits

- The numbers 200 and 207
  Read: Two hundreds and seven tens
  ____
- The numbers 100 and 105
  Read: One hundred and five tens
  ____
- The numbers 900 and 901
  Read: Nine hundreds and one ten
  ____
- The numbers 400 and 406
  Read: Four hundreds and six tens
  ____

2 Represent the number formed from 3 digits with tens in the ones place:

The number 305 can be represented in two ways as follows:

Using cards

Hundreds House	Tens House	Ones House
100 100 100	1 1 1 1 1 1	
3	0	5

Using models

Hundreds House	Tens House	Ones House
3	0	5

3 By observing the previous representations, we find that:

When there are no tens, write 0 in the tens place.
When there are no ones, write 0 in the ones place.

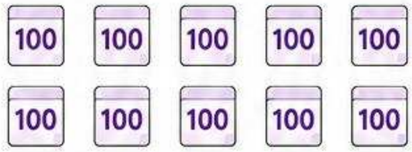
- The digit 5 in the ones place means ________ ones.
- The digit 0 in the tens place means ________ tens.
- The digit 3 in the hundreds place means ________ hundreds.

- Therefore, the number 305 is made up of 3 hundreds, 0 tens and 5 ones.

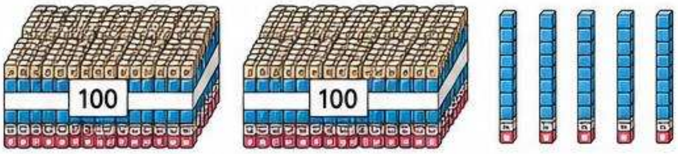
- Therefore, the number 305 is made up of 3 hundreds, 0 tens and 5 ones.

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

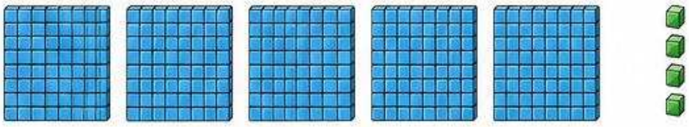
Example 1 Write the numbers that each set of blocks represents:

1 

☐ ____

2 

☐ ____

3 
☐ ____

Solution

1. 1,000
2. 256
3. 504

Solution

⭐ Let's start by counting the hundreds, then the tens, and then the ones.

1. (6 hundreds, 0 tens, and 6 ones) → 606
2. (2 hundreds, 0 tens, and 8 ones) → 208
3. (5 hundreds, 0 tens, and 5 ones) → 505

Example 2 Read the following numbers, then write the number in words:

1. 206 ....
2. 308 ....
3. 505 ....
4. 700 ....

Solution

1. 206 : two hundred and six.
2. 308 : three hundred and eight.
3. 505 : five hundred and five.
4. 700 : seven hundred.

Example 3 Write the following numbers in digits:

1. Four hundred and five ☐
2. Seven hundred and one ☐
3. Three hundred ☐

Solution

1. 405
2. 701
3. 300

Try it! ✓ Write the following numbers in digits:

1. Two hundred and eight .... ☐
2. Three hundred and fifty .... ☐
3. Six hundred .... ☐
4. Seven hundred and five .... ☐

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Remember

When representing numbers using models or cards:

- Numbers from 10 to 1 suit one box, but the number 10 does not suit one box.
- When there are 10 tens in the tens house, we group them to make one hundred, then move them to the hundreds house.

Hundreds House	Tens House	Ones House
100, 100, 100		1, 1, 1, 1
3	0	4

Hundreds House	Tens House	Ones House
(empty box ←), 100, 100	1, 1, 1, 1, 1, 1, 1, 1, 1, 1	1, 1, 1, 1
2	10	4

The tens house became 10, and the ones house increased by 1.

Example 4

Complete the following:

1. The number formed from the sum of 4 hundreds, 3 tens and 2 ones is ____________
2. The number formed from the sum of 9 hundreds, 6 tens and 9 ones is ____________
3. The number formed from the sum of 7 hundreds, 3 tens and 8 ones is ____________
4. The number formed from the sum of 300 and 5 ones is ____________

Solution 1. 432 2. 969 3. 738 4. 305

Try it!

Complete the following:

1. The number formed from the sum of 2 hundreds, 7 tens and 4 ones is ____________
2. The number formed from the sum of 3 hundreds, 8 tens and 8 ones is ____________
3. The number formed from the sum of 2 hundreds, 9 tens and 9 ones is ____________

Solution 1. 274 2. 388 3. 299

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Example 5 Complete the following numbers in each place:

1. The number 315 consists of ☐ hundreds, ☐ tens, ☐ ones.
2. The number 401 consists of ☐ hundreds, ☐ tens, ☐ ones.
3. The number 250 consists of ☐ hundreds, ☐ tens, ☐ ones.

Solution

1. 315 = 3 hundreds, 1 tens, 5 ones.
2. 401 = 4 hundreds, 0 tens, 1 ones.
3. 250 = 2 hundreds, 5 tens, 0 ones.

Solution method

1. 3 hundreds and 1 one.
2. 2 tens and 5 ones.
3. 4 tens and 1 one.

Example 6 Write the number in each case:

1. The number which has 4 in the hundreds place, 2 in the tens place, and 5 in the ones place. ______
2. The number which has 7 in the hundreds place, 3 in the tens place, and 0 in the ones place. ______
3. The number which has 6 in the hundreds place, 0 in the tens place, and 8 in the ones place. ______

Solution method

1. 4 hundreds, 2 tens, 5 ones.
2. 7 hundreds, 3 tens, 0 ones.
3. 6 hundreds, 0 tens, 8 ones.

Solution

1. 425
2. 730
3. 608

Example 7 Write each of the following in number form:

1. The number 527 is the sum of 500, 20, and 7. ______
2. The number 203 is the sum of 200, 0, and 3. ______
3. The number 460 is the sum of 400, 60, and 0. ______

Solution

1. 527 = 500 + 20 + 7
2. 203 = 200 + 0 + 3
3. 460 = 400 + 60 + 0

Solution method

1. 500 + 20 + 7 = 527
2. 200 + 0 + 3 = 203
3. 400 + 60 + 0 = 460

Let's try! ✓ Complete the following:

1. The number 207 consists of ☐ hundreds, ☐ tens, and ☐ ones.
2. The number 461 is the sum of 400, 60, and 1. Write it in number form: ______
3. The number which has 5 in the hundreds place, 0 in the tens place, and 2 in the ones place is ______.

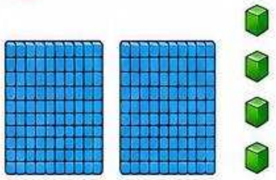
Solution

1. 2 hundreds, 0 tens, 7 ones.
2. 461 = 400 + 60 + 1
3. 502

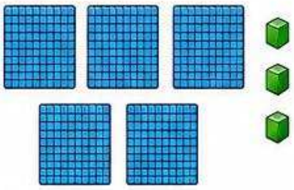
D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

1 Write the number that each representation shows:

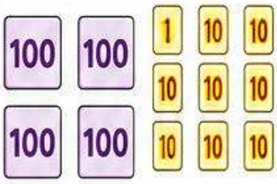
(1)



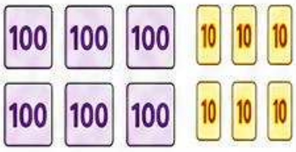
(2)



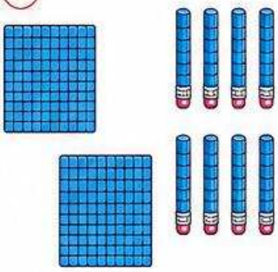
(3)



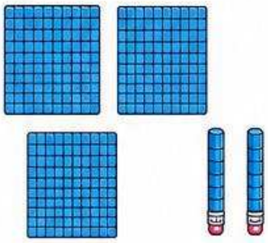
(4)



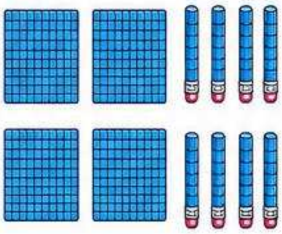
(5)



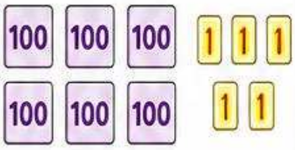
(6)



(7)



(8)



2 Read the following numbers, then write the number in words:

1. 108 ……………………………………………
2. 306 ……………………………………………
3. 405 ……………………………………………
4. 608 ……………………………………………
5. 901 ……………………………………………
6. 608 ……………………………………………
7. 200 ……………………………………………
8. 400 ……………………………………………
9. 700 ……………………………………………
10. 900 ……………………………………………

Tips: Read the number from the hundreds place, then the tens place, then the ones place.

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

3 Write the following numbers in digits:

1. One hundred and thirty. ....
2. Three hundred and seventeen. ....
3. Five hundred and thirty. ....
4. Four hundred and twenty-eight. ....
5. Six hundred and nineteen. ....
6. Nine hundred and one. ....
7. Two hundred. ....
8. Fifty-six. ....
9. Seven hundred. ....
10. Three hundred. ....

4 Write the suitable number in each of the following:

1. The number formed by the sum of 4 hundreds, 8 tens and 9 ones is ....
2. The number formed by the sum of 5 hundreds, 4 tens and 3 ones is ....
3. The number formed by the sum of 6 hundreds, 5 tens and 8 ones is ....
4. The number formed by the sum of 3 hundreds, 2 tens and 6 ones is ....
5. The number formed by the sum of 7 hundreds, 5 tens and 0 ones is ....
6. The number formed by the sum of 6 hundreds, 4 tens and 4 ones is ....
7. The number formed by the sum of 1 hundred, 9 tens and 0 ones is ....
8. The number formed by the sum of 5 hundreds, 4 tens and 4 ones is ....
9. The number formed by the sum of 7 hundreds, 3 tens and 2 ones is ....
10. The number formed by the sum of 3 hundreds, 2 tens and 2 ones is ....

5 Write the missing numbers in each of the following:

1. The number 247 consists of .... hundreds, ... tens, ... ones.
2. The number 982 consists of .... hundreds, ... tens, ... ones.
3. The number 707 consists of .... hundreds, ... tens, ... ones.
4. The number 304 consists of .... hundreds, ... tens, ... ones.
5. The number 660 consists of .... hundreds, ... tens, ... ones.

Tip: Read the number from the hundreds place, then the tens place, then the ones place.

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

6 Complete each of the following:

No.	Hundreds		Tens		Ones		Number
(1)	☐	+	6	+	2	=	762
(2)	☐	+	9	+	3	=	893
(3)	☐	+	☐	+		=	309
(4)	☐	+	☐	+		=	271
(5)	6	+	7	+	8	=	☐
(6)	3	+	5	+		=	359
(7)	1	+	☐	+	4	=	184
(8)	☐	+		+		=	456
(9)	☐	+	☐	+	☐	=	666
(10)	9	+	2	+	5	=	☐

7 Write the number in each case:

1. The number whose digit in the hundreds place is 6, digit in the tens place is 2, digit in the ones place is 8 is ☐
2. The number whose digit in the hundreds place is 2, digit in the tens place is 9, digit in the ones place is 1 is ☐
3. The number whose digit in the hundreds place is 7, digit in the tens place is 6, digit in the ones place is 8 is ☐
4. The number whose digit in the hundreds place is 5, digit in the tens place is 2, digit in the ones place is 0 is ☐
5. The number whose digit in the hundreds place is 9, digit in the tens place is 1, digit in the ones place is 0 is ☐
6. The number whose digit in the hundreds place is 4, digit in the tens place is 7, digit in the ones place is 0 is ☐
7. The number whose digit in the hundreds place is 6, digit in the tens place is 0, digit in the ones place is 2 is ☐
8. The number whose digit in the hundreds place is 4, digit in the tens place is 0, digit in the ones place is 5 is ☐
9. The number whose digit in the hundreds place is 2, digit in the tens place is 8, digit in the ones place is 0 is ☐
10. The number whose digit in the hundreds place is 1, digit in the tens place is 9, digit in the ones place is 0 is ☐

8 Write each of the following as a sum in number form:

1. 325 is the sum of 300, 20, and 5. .... ◄
2. 876 is the sum of 800, 70, and 6. .... ◄
3. 503 is the sum of 500 and 3. .... ◄
4. 340 is the sum of 300 and 40. .... ◄

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Name: ____________________ Date: ____________________

Test Yourself

1 Complete the following:

(1) The number formed by the sum of 2 hundreds, 9 tens and 4 ones is ____________

(2) The number formed by the sum of 6 hundreds, 6 tens and 8 ones is ____________

(3) The number 452 consists of ______ hundreds, ______ tens, and ______ ones.

(4) The number 308 consists of ______ hundreds, ______ tens, and ______ ones.

(5) The number 840 consists of ______ hundreds, ______ tens, and ______ ones.

(6) The number 358 = 300 + 50 + 8
The number is ____________

(7) The number 615 = 600 + 10 + 5
The number is ____________

(8) The number 271 = 200 + 70 + 1
The number is ____________

(9) The number 666 = 600 + 60 + 6
The number is ____________

(10) The number 925 = 900 + 20 + 5
The number is ____________

2 Write each number as a sum in standard form (hundreds + tens + ones):

(1) 972 = ____________

(2) 357 = ____________

(3) 705 = ____________

3 Read the clock, then write the time in two ways:

(1)

Time in words after : ____________

Time in words before: ____________

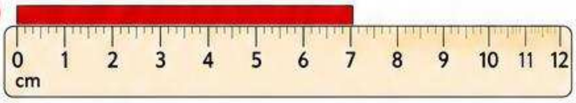
(2)

Time in words after : ____________

Time in words before: ____________

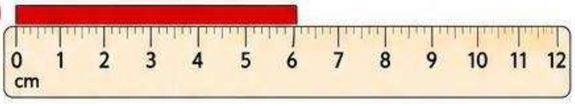
4 Write the length of each colored segment:

(1)



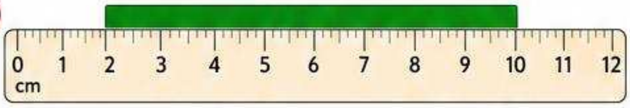
Length = __________ cm

(2)



Length = __________ cm

(3)



The length = ________ cm = ________ cm and ________ mm

Tip: Read the number from the hundreds place, then the tens place, then the ones place.

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Lesson 4 — Numbers Greater Than 100 (Part 4)

Name: ____________

Date: ____________

Let's Learn — Multiples of 10

12 tens	11 tens	10 tens
10 10 10 10 10 10 10 10 10 10 10 10	10 10 10 10 10 10 10 10 10 10 10	10 10 10 10 10 10 10 10 10 10
120	110	100

1 Answer the following questions using the cards:

1. What is the number obtained by adding 15 tens? ☐
2. How many tens are in the number 230? ☐

2 Solve the following:

1 15 tens

10 tens = 100
5 tens = 50
→ 15 tens — The number is ☐

10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 — 15 tens

2 23 tens

200 = 20 tens
30 = 3 tens
→ 23 tens — The number is ☐

100 100 10 10 10 10 — 23 tens

↓

10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 — 23 tens

3 Extra Practice

1. 200 equals ☐ tens.
2. 300 equals ☐ tens.

Remember:
10 tens = 100
A two-digit number of tens can be written using hundreds.

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Example 2

Think about the number that is the result of adding 28 tens. Then answer the questions.

1. What is the result of adding 20 tens?

....

2. What is the result of adding 8 tens?

....

3. What is the result of adding 1 and 2 from the results of questions 1 and 2 to get 28 tens?

....

Solution

⭐ We split the number 28 tens into 20 tens and 8 tens.

1. 20 tens = 200
2. 8 tens = 80
3. 200 + 80 = 280

The number is 280.

Example 3

Answer the questions:

1. What is the result of adding 40 tens?

....

2. What is the result of adding 77 tens?

....

3. How many tens are in the number 500?

....

4. How many tens are in the number 340?

....

5. How many hundreds are in the number 160?

....

6. How many hundreds and 5 tens are in 335?

....

Solution

1. 40 tens = 4 hundreds = 400
2. 77 tens = 70 tens + 7 tens = 700 + 70 = 770
3. 500 = 50 tens
4. 340 = 34 tens
5. 160 = 16 tens = 1 hundred and 6 tens
6. 335 = 3 hundreds and 3 tens = 33 tens

Exercise ✔

Answer the questions:

1. What is the result of adding 25 tens?

....

2. What is the result of adding 60 tens?

....

3. How many tens are in the number 180?

4. How many hundreds are in the number 400?

....

5. How many hundreds are in the number 130?

....

6. How many hundreds and 1 ten are in 312?

Solutions

1. 25 tens = 2 hundreds and 5 tens = 250
2. 60 tens = 6 hundreds = 600
3. 180 = 18 tens = 1 hundred and 8 tens
4. 400 = 4 hundreds
5. 130 = 1 hundred and 3 tens
6. 312 = 3 hundreds and 1 ten = 31 tens

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

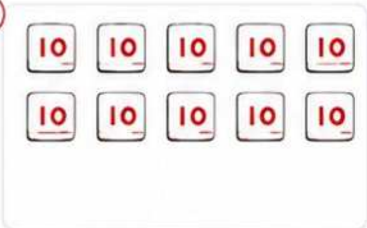
Homework

1 Look at the tens cards below, then complete the example.

(1)

= ________

(2)

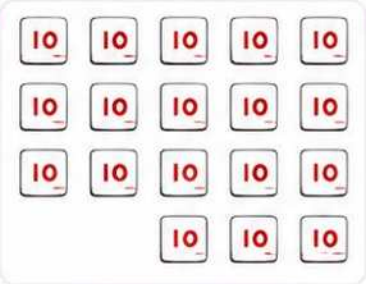


= ________

Example

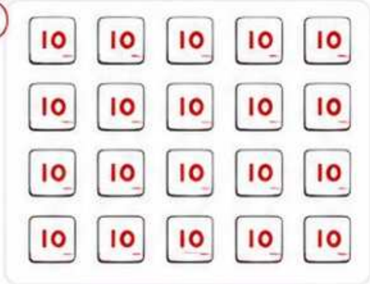
8 tens = 80

(3)



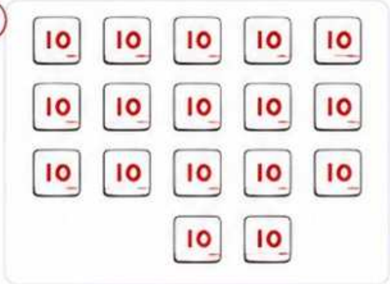
= ________

(4)



= ________

(5)



= ________

2 Match each group of tens to the correct number.

(1) 12 tens	(2) 8 tens	(3) 18 tens	(4) 25 tens
80	120	180	250

3 Answer the following questions.

1. What is the result of adding 14 tens? ....
2. What is the result of adding 27 tens? ....
3. What is the result of adding 90 tens? ....
4. What is the number of tens in the number 70? ....
5. What is the number of tens in the number 360? ....
6. What is the number of tens in the number 800? ....
7. How many hundreds are in the number 180? ....
8. How many hundreds and one ten are in the number 328? ....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

1 **Think about the number that is the result of adding 42 tens.**

a. What is the result of adding 40 tens? ....

b. What is the result of adding 2 tens? ....

c. Add the results of (a) and (b), what is the result of adding 42 tens?

....

Example

42 tens = 40 tens + 2 tens

☐ + ☐ = ☐

2 **Think about the number that is the result of adding 57 tens.**

a. What is the result of adding 50 tens? ....

b. What is the result of adding 7 tens? ....

c. Add the results of (a) and (b), what is the result of adding 57 tens?

....

Example

57 tens = 50 tens + 7 tens

☐ + ☐ = ☐

3 **Think about the number that is the result of adding 85 tens.**

a. What is the result of adding 80 tens? ....

b. What is the result of adding 5 tens? ....

c. Add the results of (a) and (b), what is the result of adding 85 tens?

....

Example

85 tens = 80 tens + 5 tens

☐ + ☐ = ☐

4 **Think about the number that is the result of adding 50 tens.**

a. How many tens are in the number 500? ....

b. How many hundreds are in the number 500? ....

c. Add the results of (a) and (b), what is the result of adding 50 tens?

....

Example

50 tens = 500

☐

5 **Think about the number that is the result of adding 63 tens.**

a. How many tens are in the number 600? ....

b. How many tens are in the number 30? ....

c. Add the results of (a) and (b), what is the result of adding 63 tens?

....

Example

63 tens = 60 tens + 3 tens

☐ + ☐ = ☐

6 **Think about the number that is the result of adding 74 tens.**

a. How many tens are in the number 700? ....

b. How many tens are in the number 40? ....

c. Add the results of (a) and (b), what is the result of adding 74 tens?

....

Example

74 tens = 70 tens + 4 tens

☐ + ☐ = ☐

Tip: 1 hundred = 10 tens

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Lesson 4 Test Yourself

1 Choose the correct answer:

1. 56 tens = ... — 506 | 605 | 560 | 650
2. The number of tens in 600 is .... tens. — 610 | 60 | 600 | 6
3. How many ones are in 860? .... — 6 | 860 | 86 | 806
4. 30 minutes = ... minutes. — 90 | 85 | 80 | 31
5. 92 mm = ... mm. — 2 cm 9 mm | 9 cm 20 mm | 20 cm 9 mm | 9 cm 90 mm

2 Complete the following:

1. 23 tens = ...
2. 15 tens = ...
3. 26 – 19 = ...
4. 3 cm = ... mm
5. 4 cm 6 mm = ... mm
6. 70 minutes = ... hours and .... minutes.
7. 28 + 32 = ...
8. 3 cm + 2 cm 4 mm = ... mm

3 Think about the number that is the result of adding 95 tens. Then answer:

1. What is the result of adding 90 tens? ....
2. What is the result of adding 5 tens? ....
3. Add the results of 1 and 2 .
   What is the result of adding 95 tens? ....

4 Look at the pictograph, then answer the questions:

Favorite Animals

	○	○	○	○	
	○	○		○	○
	○	○	○		○
	○	○	○	○	○
	○	○	○	○	○
Number	1	2	3	4	6
Key	○ = 1 child				

1. Which animal is the most favorite among the children? ....
2. Which animal is the least favorite among the children? ....
3. What is the total number of children who like the lion and the rabbit? ....
4. What is the number of children who like the fish more than the bird? ....

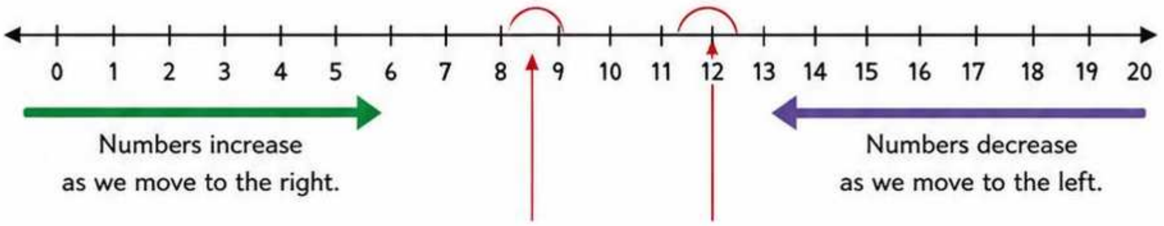
D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Lesson 5 — Numbers greater than 100 (Part 5)

Learn

1 Learn

- A number line shows numbers in order from left to right.



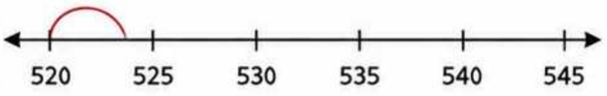
- The line is divided between any two numbers, for example between 9 and 10, into 20 equal parts. Each part represents 1 unit.

The scale of the line is 1.

2 Examples

Here are other number lines with different scales:

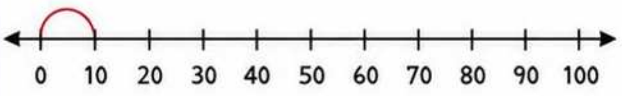
Each part represents 5.



The line is divided between any two numbers from 520 to 545 into 5 equal parts.
Each part represents 5.

The scale of the line is 5.

Each part represents 10.



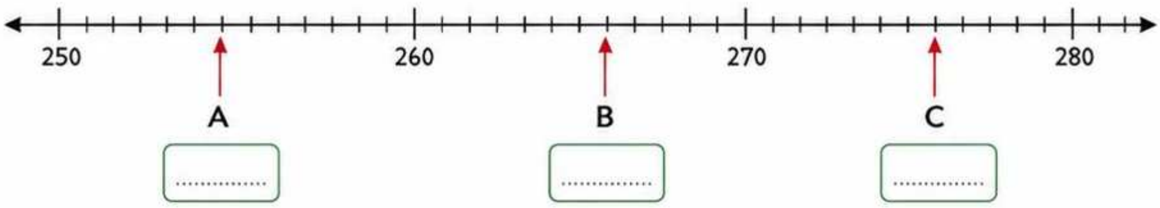
The line is divided between any two numbers from 0 to 100 into 10 equal parts.
Each part represents 10.

The scale of the line is 10.

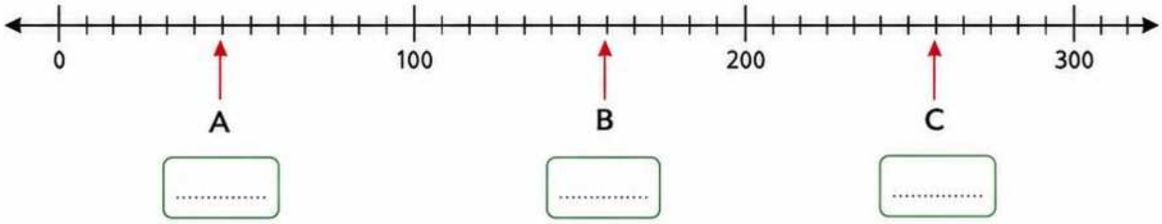
3 Example

Write the numbers shown by the letters A, B and C on the number lines:

1



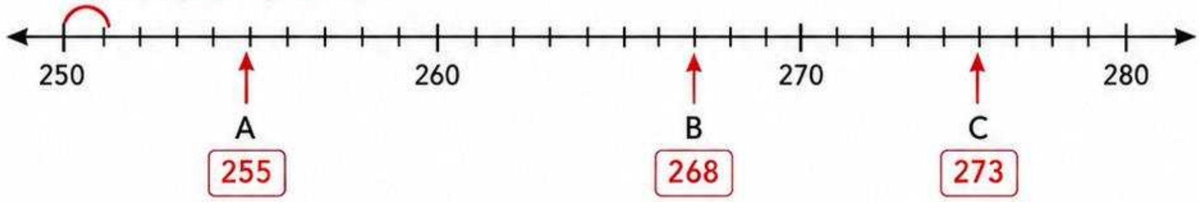
2



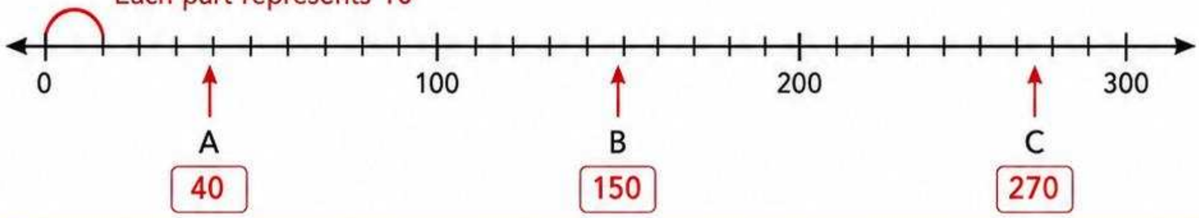
D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

How to solve

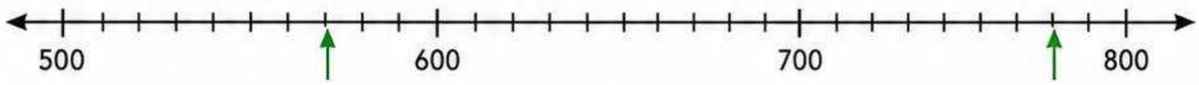
1 Look at the line. We find that between 250 and 260, there are 10 small parts.
Each small part represents 1.



2 Look at the line. We find that between 0 and 100, there are 10 small parts.
Each small part represents 10.

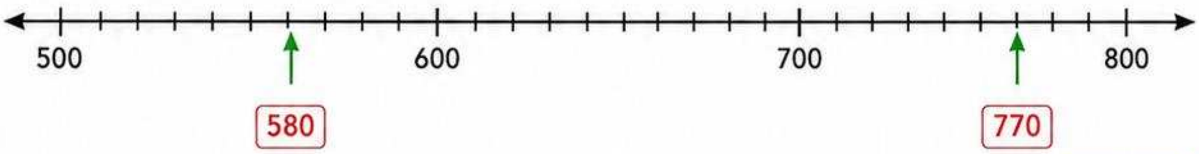


Example Look at the line below, then put ↑ above the marks that represent 580 and 770:



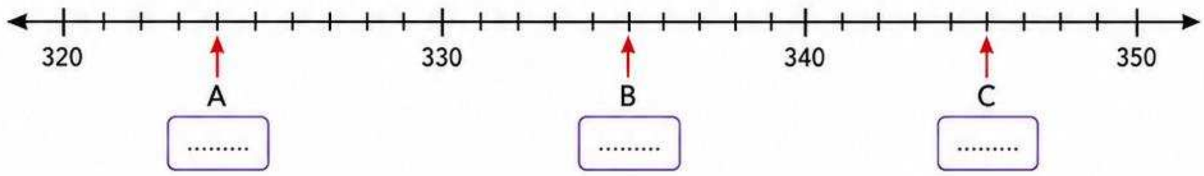
How to solve

▶ Look at the line. We find that between 500 and 600, there are 10 small parts.
Each small part represents 10.

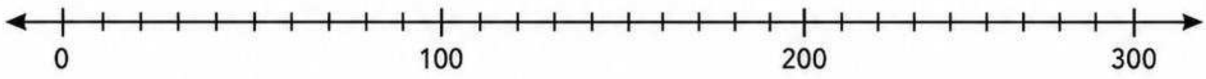


Try it ✔

1 Write the numbers shown by the letters A, B and C on the number line:



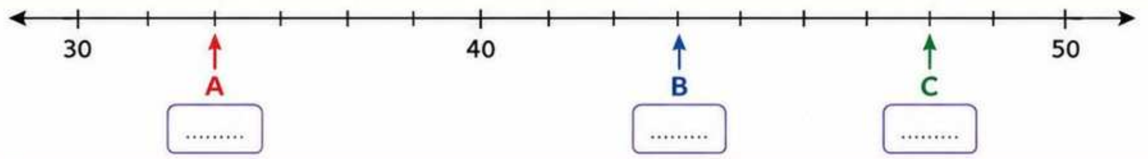
2 Look at the line below, then put ↑ above the marks that represent 130 and 210:

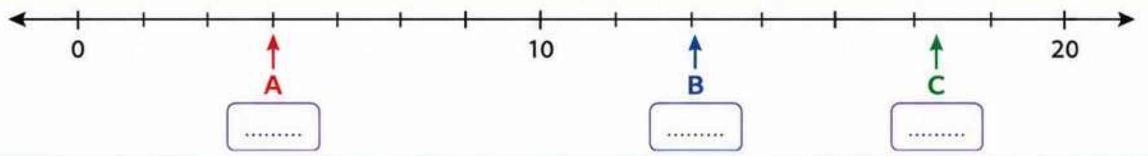


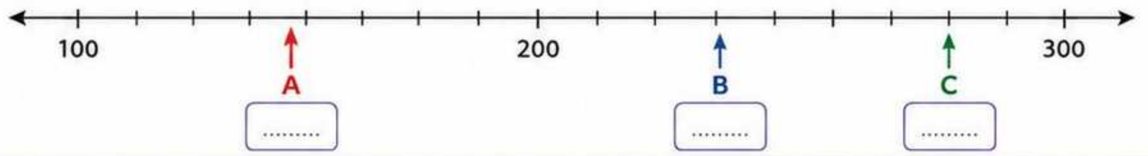
D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

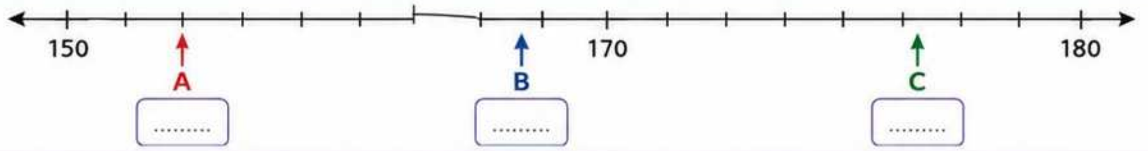
Homework

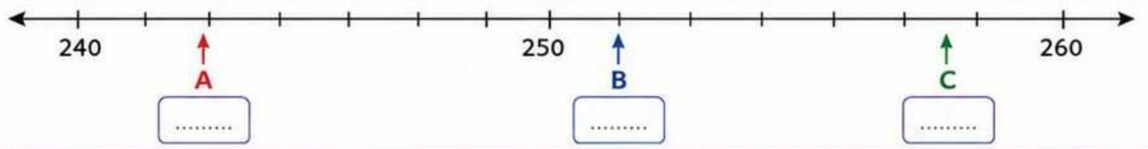
1 Write the numbers represented by the letters 'A', 'B' and 'C' on the number line:

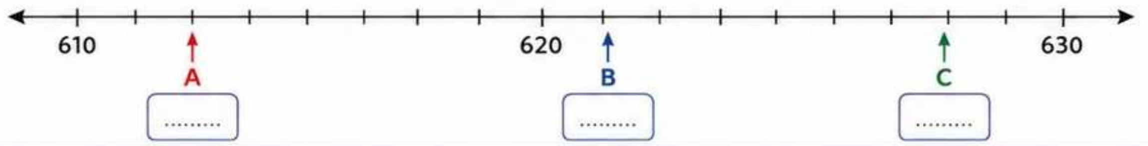
① 

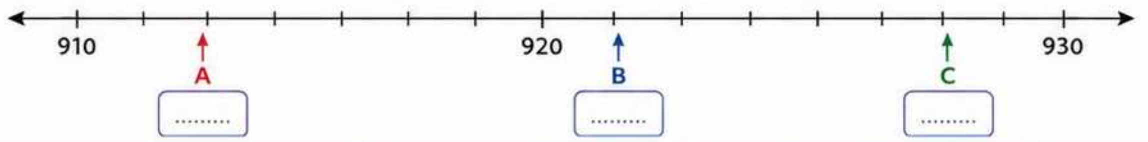
② 

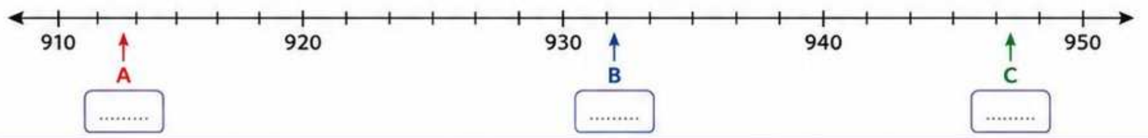
③ 

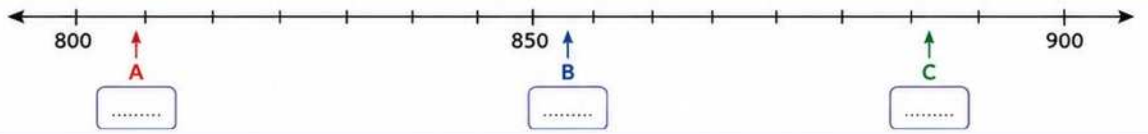
④ 

⑤ 

⑥ 

⑦ 

⑧ 

⑨ 

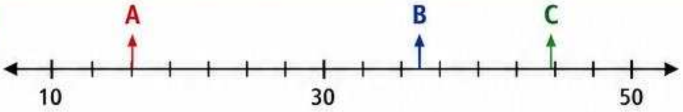
D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Name: ______________________ Date: ______________________

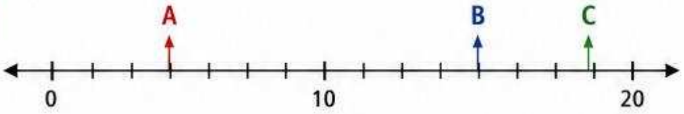
NUMBER LINES

1 Write the numbers represented by the letters.

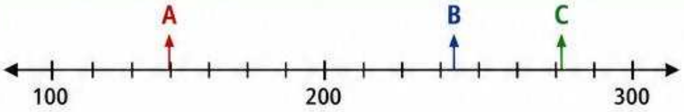
Write the number shown by each letter A, B and C on the number line.

1


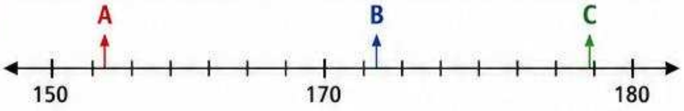
A = ______ B = ______ C = ______

2


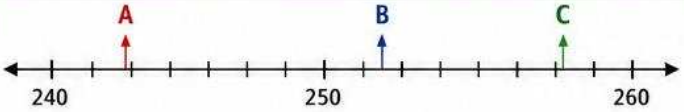
A = ______ B = ______ C = ______

3


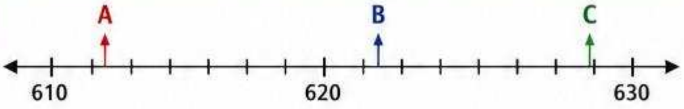
A = ______ B = ______ C = ______

4


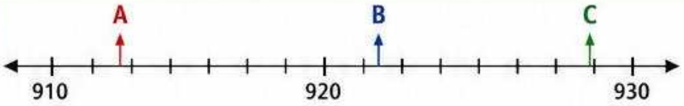
A = ______ B = ______ C = ______

5


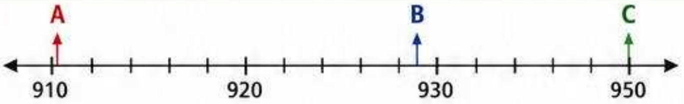
A = ______ B = ______ C = ______

6


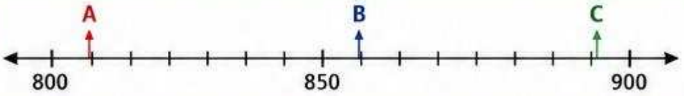
A = ______ B = ______ C = ______

7


A = ______ B = ______ C = ______

8


A = ______ B = ______ C = ______

9


A = ______ B = ______ C = ______

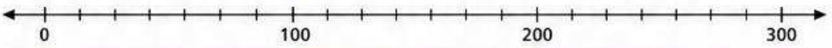
2 Look at the number line, then write the numbers represented by the given values.

Place an ↑ above the mark that represents each number.

a) On the number line below, put an ↑ above the mark that represents 580 and 770.

580: ________ 770: ________

b) On the number line below, put an ↑ above the mark that represents 130 and 210.



130: ________ 210: ________

c) On the number line below, put an ↑ above the mark that represents 346 and 322.

346: ________ 322: ________

★ Good luck! ★

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Name: ____________________ Date: ____________

Lesson 0

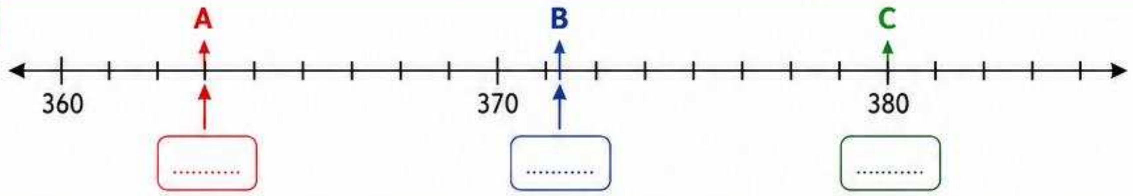
Test Yourself

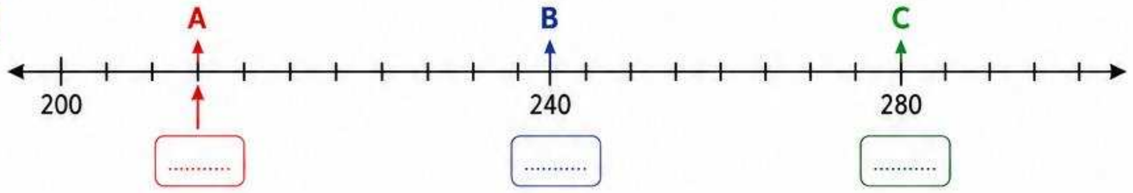
Up to Lesson

1 Complete the following:

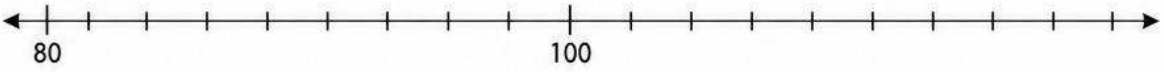
1. Sixteen more than 65 = __________
2. 350 = __________ tens.
3. 18 – 90 = __________
4. 5 cm = __________ mm.
5. 80 minutes = __________ hour and __________ minutes.
6. 39 + 65 = __________
7. 5 cm + 2 cm = __________ cm

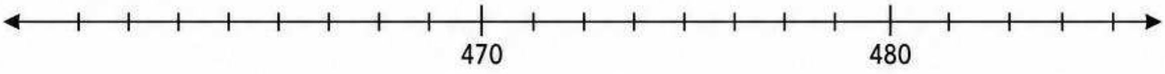
2 Write the numbers represented by the letters A, B and C on the number lines.

1


2


3 Look at the number lines and place ↑ above the mark that represents the given number.

1 95 , 89


2 466 , 482


4 Read, then write the calculation and the answer.

Mohammed has 12 chickens, and his uncle has 79 chickens.
How many chickens do they have together now?

- **Calculation:** ______________________________
- **Answer:** ______________________________

★ Good luck! ★

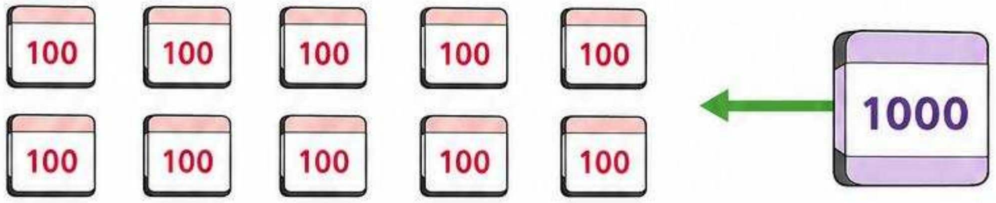
D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Lesson 6 Numbers Greater than 100 (Part Six)

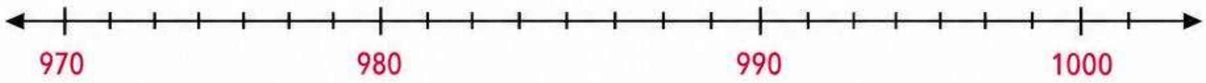
Up to Lesson

1 Learn Numbers up to 1000

☆ When we add 10 sets of the number 100, we get 1000.
Read: one thousand.



Write the number 1000 on the number line:



2 Expressing numbers in different ways

Examples: We can express 520 in different ways:

The result of adding 500 and 20 = 520 ⟷ 500 + 20 = 520

The number that is less than 600 by 80 = 520 ⟷ 600 – 80 = 520

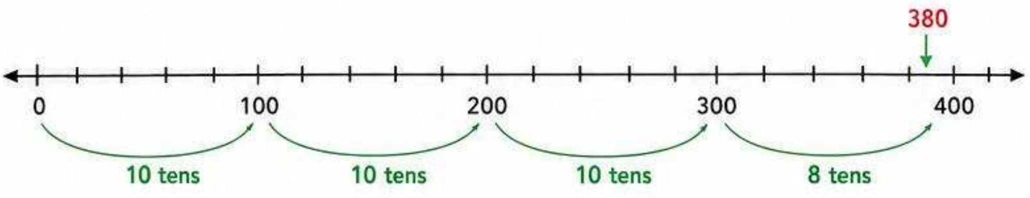
The result of adding 52 tens = 520 ⟷ 52 tens = 520

3 Example Write the number 380 in different ways:

1. 80 + ________ = 380
   ____
2. 380 = ________ – 20
   ____
3. 380 is the result of adding ________ tens.
   ____

4 Solution

1. 380 = 300 + 80
2. 380 = 400 – 20
3. 380 is the result of adding 38 tens.



★ Great job! Keep it up! ★

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

1 Example — Complete the following:

1. 720 is the result of adding ________ and 20.
2. 630 is the number that is less than ________ by 70.
3. ________ and 20 is the result of adding 720.
4. ________ is the number that is less than 630 by 70.

Solution

1. 700 = 720 – 20 (Because: 720 = 700 + 20)
2. 700 = 630 + 70 (Because: 630 = 700 – 70)

2 Example — Write the following numbers in digits:

1. The number that is less than one thousand by 5: ________
2. The number that is less than one thousand by 30: ________
3. The number that is less than one thousand by 400: ________
4. The number that is greater than 998 by 2: ________
5. The number that is greater than 960 by 40: ________
6. The number that is greater than 700 by 300: ________

Solution

1. 995 = 1000 – 5 ←
2. 970 = 1000 – 30 ←
3. 600 = 1000 – 400 ←
4. 1000 = 998 + 2 ←
5. 1000 = 960 + 40 ←
6. 1000 = 700 + 300 ←

3 Example — Write the calculation and the answer.

1. 995 = 1000 – ________
2. 1000 = 997 + ________
3. 1000 = ________ + 10
4. 1000 = 980 + ________
5. 1000 = 910 + ________
6. 1000 = 750 + ________

Solution

1. 995 = 1000 – 5
2. 1000 = 997 + 3
3. 1000 = 990 + 10
4. 1000 = 980 + 20
5. 1000 = 910 + 90
6. 1000 = 750 + 250

4 Challenge ✓ Complete the following:

1. The number that is less than one thousand by 7 is ________ .
2. The number that is greater than 940 by 60 is ________ .
3. 830 and ________ is the result of adding 30.
4. 510 is the result of adding ________ tens.

Solution

1. 993
2. 1000
3. 200
4. 51 tens

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Homework

1 Complete the following:

1. The number that is less than 300 by 10 is ________.
2. The number that is greater than 250 by 20 is ________.
3. The number that is less than 500 by 10 is ________.
4. The number that is greater than 350 by 30 is ________.
5. The number that is less than 400 by 40 is ________.
6. The number that is greater than 400 by 60 is ________.
7. The number that is less than 950 by 50 is ________.
8. The number that is greater than 250 by 70 is ________.
9. The number that is less than 650 by 50 is ________.
10. The number that is greater than 500 by 20 is ________.
11. The number that is less than 1000 by 90 is ________.
12. The number that is greater than 820 by 40 is ________.
13. The number that is less than 1000 by 100 is ________.
14. The number that is greater than 950 by 50 is ________.

2 Write the missing numbers in each of the following:

1	The number ________ is the result of adding 340 and 40.	The number ________ is the number that is less than 340 by 60.
2	The number ________ is the result of adding 550 and 50.	The number ________ is the number that is less than 550 by 50.
3	The number ________ is the result of adding 530 and 30.	The number ________ is the number that is less than 530 by 70.
4	The number ________ is the result of adding 290 and 90.	The number ________ is the number that is less than 290 by 10.
5	The number ________ is the result of adding 810 and 10.	The number ________ is the number that is less than 810 by 90.
6	The number ________ is the result of adding 960 and 60.	The number ________ is the number that is less than 960 by 40.

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

3 Express each number in different ways

(Write the "missing numbers".)

1 — 120

a) 20 + ________ = 120

b) 80 – ________ = 120

c) 120 is the result of adding ________ tens.

2 — 250

a) 50 + ________ = 250

b) 50 – ________ = 250

c) 250 is the result of adding ________ tens.

3 — 370

a) 70 + ________ = 370

b) 30 – ________ = 370

c) 370 is the result of adding ________ tens.

4 — 660

a) 60 + ________ = 660

b) 40 – ________ = 660

c) 660 is the result of adding ________ tens.

5 — 740

a) 70 + ________ = 740

b) 60 – ________ = 740

c) 740 is the result of adding ________ tens.

6 — 820

a) 20 + ________ = 820

b) 80 – ________ = 820

c) 820 is the result of adding ________ tens.

4 Complete the following:

1. The number that is greater than 270 by 10 is ________.
2. The number that is less than 670 by 30 is ________.
3. The number that is less than 1000 by 40 is ________.
4. The number that is greater than 920 by 80 is ________.
5. 360 – ________ = 40
6. 170 + ________ = 170
7. 720 is the result of adding ________ tens.
8. 670 is the result of adding ________ tens.
9. 48 is the result of adding ________ tens.
10. 100 is the result of adding ________ tens.

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Lesson 6

Test Yourself

Up to Lesson

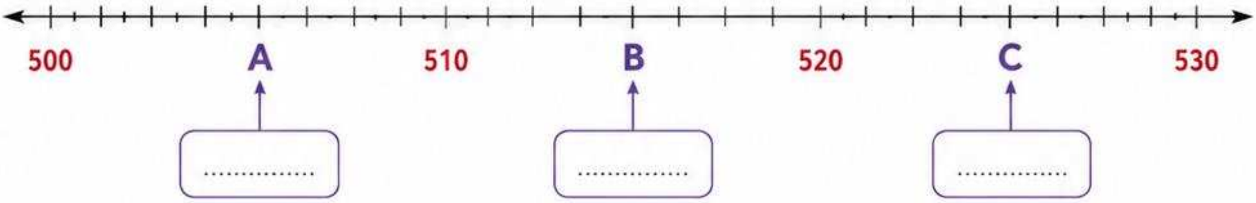
1 Choose the correct answer:

1. The number that is less than 1000 by 8 is ________ . (920 , 985 , 998 , 992)
2. The number that is greater than 970 by 30 is ________ . (730 , 1000 , 973 , 900)
3. 90 – ________ = 910 (990 , 800 , 900 , 1000)
4. 80 + ________ = 480 (500 , 440 , 400 , 40)
5. The number 280 is the result of adding ________ tens. (680 , 820 , 208 , 58)

2 Complete the following:

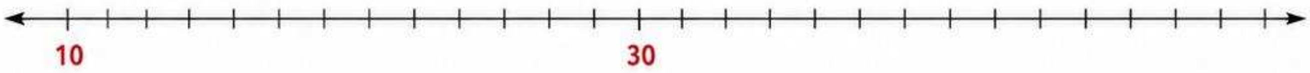
1. 3 cm 5 mm = ________ mm
2. 1 hour and 45 minutes = ________ minutes
3. 17 tens = ________
4. 500 + 20 + 6 = ________
5. 684 = ________ hundreds and ________ tens
6. 3 cm 5 mm = ________ mm
7. 17 tens = ________
8. 500 + 20 + 6 = ________

3 Write the number represented by each of the letters (A), (B) and (C) on the number line below:



4 Look at the number line, and put an ↑ at the mark that represents each of the following numbers:

15 , 22 , 38



5 Express each number in different ways:

1 350

a) 50 + ________ = 350
b) 50 – ________ = 350
c) 350 is the result of adding ________ tens.

2 920

a) 20 + ________ = 920
b) 80 – ________ = 920
c) 920 is the result of adding ________ tens.

★ Excellent work! You did great! ★

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Lesson 7 Numbers greater than 100 (Part 7)

Lesson

Add and subtract multiples of 10 and 100

Learn

1 Add multiples of 10 and 100.

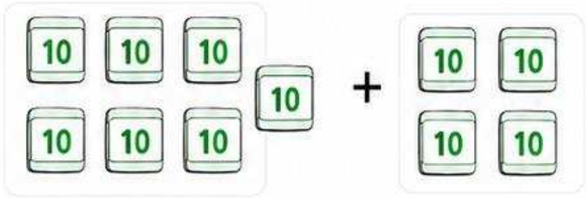
500 + 200 = ?

500 = 5 hundreds   200 = 2 hundreds

5 hundreds + 2 hundreds = 7 hundreds

Therefore: 700 = 500 + 200

70 + 40 = ?



40 = 4 tens   70 = 7 tens

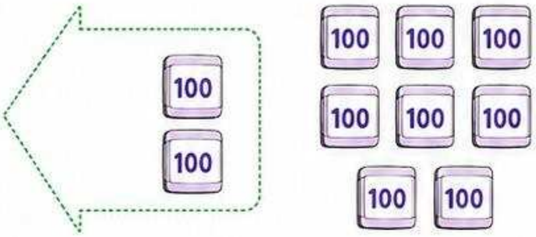
4 tens + 7 tens = 11 tens

Therefore: 110 = 70 + 40

---

2 Subtract multiples of 10 and 100.

800 – 200 = ?

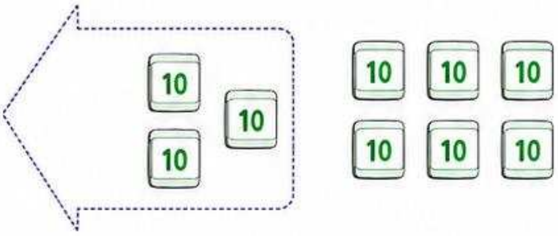


200 = 2 hundreds   800 = 8 hundreds

8 hundreds – 2 hundreds = 6 hundreds

Therefore: 600 = 800 – 200

80 – 30 = ?



80 = 8 tens   30 = 3 tens

8 tens – 3 tens = 5 tens

Therefore: 50 = 80 – 30

☆ Great job! You're doing great! ☆

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

1 **Example 1: Find the result of each of the following:**

1. 60 + 80 = ____________
2. 200 + 800 = ____________
3. 130 + 70 = ____________
4. 1000 – 300 = ____________

Solution:

1. 6 tens + 8 tens = 14 tens → 140 = 80 + 60
2. 8 hundreds + 2 hundreds = 10 hundreds → 1000 = 800 + 200
3. 13 tens + 7 tens = 20 tens → 200 = 130 + 70
4. 10 hundreds – 3 hundreds = 7 hundreds → 700 = 1000 – 300

2 **Example 2: Read, then write the arithmetic operation and the answer:**

1. Mohammed has a red ribbon that is 70 cm long,
and a blue ribbon that is 60 cm long.
What is the total length of the red and blue ribbons together?
Operation: ____________
Answer: ____________

2. Dalya had 800 pounds. She bought a dress for 300 pounds.
How much money is left with Dalya?
Operation: ____________
Answer: ____________

Solution:

1. 7 tens + 6 tens = 13 tens → 130 = 70 + 60
★ Arithmetic operation: ____________
★ Answer: ____________

2. 800 – 300 = 500 → 500 = 800 – 300
★ Arithmetic operation: ____________
★ Answer: ____________

Try it yourself! ✔

1. 70 + 60 = ____________
2. 300 + 500 = ____________
3. 160 + 90 = ____________
4. 1000 – 200 = ____________

★ Great job! You're doing great! ★

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Homework

Name: ______________________ Class: ____________ Date: ______________

1 Find the result of the addition in each case using the model:

(A) 400 + 500

Hundreds .... = Hundreds .... + Hundreds ....

Therefore: .... = 400 + 500

Answer: ______________________

(B) 60 + 30

Tens .... = Tens .... + Tens ....

Therefore: .... = 60 + 30

Answer: ______________________

2 Find the result of the subtraction in each case using the model:

(A) 900 − 600

Hundreds .... = Hundreds .... − Hundreds ....

Therefore: .... = 900 − 600

Answer: ______________________

(B) 70 − 20

Tens .... = Tens .... − Tens ....

Therefore: .... = 70 − 20

Answer: ______________________

3 Find the result of the addition:

1. 60 + 20 = ________
2. 50 + 70 = ________
3. 40 + 30 = ________
4. 60 + 30 = ________
5. 70 + 70 = ________
6. 90 + 50 = ________
7. 200 + 100 = ________
8. 400 + 300 = ________
9. 600 + 200 = ________
10. 600 + 400 = ________
11. 700 + 300 = ________
12. 900 + 100 = ________

4 Find the result of the subtraction:

1. 90 − 40 = ________
2. 60 − 40 = ________
3. 80 − 40 = ________
4. 100 − 60 = ________
5. 110 − 30 = ________
6. 130 − 40 = ________
7. 100 − 60 = ________
8. 170 − 90 = ________
9. 600 − 200 = ________
10. 900 − 700 = ________
11. 150 − 700 = ________
12. 1000 − 900 = ________

★ Great work! Keep practicing! ★

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Name : ____________ Class : ________ Date : __________

Do your best

Lesson 7 Test Yourself

1 Choose the correct answer:

(1) 6 tens + 8 ones =	(A) 860	(B) 86	(C) 140	(D) 14
(2) 1 thousand + 9 tens =	(A) 19	(B) 10	(C) 100	(D) 1000
(3) 700 – 300 =	(A) 500	(B) 400	(C) 300	(D) 1000
(4) 5 tens =	(A) 500	(B) 50	(C) 15	(D) 5
(5) Write the number seven hundred sixty-five in digits. =	(A) 765	(B) 562	(C) 256	(D) 265
(6) 600 + 50 + 8 =	(A) 856	(B) 685	(C) 658	(D) 568

2 Find the result of each addition:

(1) 60 + 50 = ________
(2) 80 + 70 = ________
(3) 700 + 300 = ________
(4) 400 + 500 = ________
(5) 80 + 70 = ________
(6) 700 + 200 = ________
(7) 26 + 37 = ________
(8) 52 + 69 = ________
(9) 20 + 59 = ________

3 Find the result of each subtraction (larger number first):

(1) 90 – 50 = ________
(2) 100 – 60 = ________
(3) 700 – 300 = ________
(4) 900 – 800 = ________
(5) 900 – 200 = ________
(6) 900 – 100 = ________
(7) 98 – 40 = ________
(8) 68 – 24 = ________
(9) 98 – 12 = ________

4 Read the word problems, then write the operation and the answer:

(1) A rectangular strip is 40 cm long and 55 cm wide, in green and white stripes together.
What is the total length of the green and the white stripes?

Operation : ____________________ ☆
Answer : ____________________ ☆

(2) Ahmed had 800 pounds, and his brother gave him 500 pounds.
What is the total amount Ahmed has now?

Operation : ____________________ ☆
Answer : ____________________ ☆

★ You can do it! ★

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Lesson 8 Numbers greater than 100 (Part Two)

Learn

Add and subtract hundreds, tens, and ones:

First: Add hundreds, tens, or ones together:

For example, we can add 200 + 30 by using the place value table as follows:

Hundreds House	Tens House	Ones House
100 100	•	•
2	•	•

\+

Hundreds House	Tens House	Ones House
	10 10 10	•
	3	•

Hundreds House	Tens House	Ones House
100 100	10 10 10	•
2	3	•

200 and 30 together make 230.

So, 200 + 30 = 230.

Second: Subtract tens or ones from hundreds:

For example, we can subtract 402 – 2 by using the place value table as follows:

Hundreds House	Tens House	Ones House
100 100 100 100		1 1
4	•	2

Hundreds House	Tens House	Ones House
100 100 100 100		
4	•	•

402 consists of 4 hundreds and 2 ones.

Subtract 2 from 2, then 0 ones remains.

So, 402 – 2 = 400.

Example 1

1. Find the result of each of the following:

(1) 300 + 60 = ______

(2) 900 + 50 = ______

(3) 470 – 70 = ______

(4) 304 – 4 = ______

Solution Method

1 300 + 60 = 360

300 is 3 hundreds and 60 is 6 tens.

300 + 60 = 360

2 900 + 50 = 950

900 is 9 hundreds and 50 is 5 tens.

900 + 50 = 950

3 470 – 70 = 400

```
  470
-  70
-----
  400
```

470 consists of 4 hundreds and 70 is 7 tens.

Subtract 7 tens from 7 tens, then 0 tens remains.

470 – 70 = 400

4 304 – 4 = 300

```
  304
-   4
-----
  300
```

304 consists of 3 hundreds and 4 is 4 ones.

Subtract 4 ones from 4 ones, then 0 ones remains.

304 – 4 = 300

★ You can do it! ★

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

1 Find the result of the addition using the place value table:

(1) 600 + 50 = ________

Hundreds (House)	Tens (House)	Ones (House)

+

Hundreds (House)	Tens (House)	Ones (House)

↓

Hundreds (House)	Tens (House)	Ones (House)

(2) 400 + 3 = ________

Hundreds (House)	Tens (House)	Ones (House)

+

Hundreds (House)	Tens (House)	Ones (House)

↓

Hundreds (House)	Tens (House)	Ones (House)

2 Find the result of the subtraction using the place value table:

(1) 340 – 40 = ________

Hundreds (House)	Tens (House)	Ones (House)

↓

Hundreds (House)	Tens (House)	Ones (House)

↓

Hundreds (House)	Tens (House)	Ones (House)

(2) 207 – 7 = ________

Hundreds (House)	Tens (House)	Ones (House)

↓

Hundreds (House)	Tens (House)	Ones (House)

↓

Hundreds (House)	Tens (House)	Ones (House)

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

3 Find the result of each addition:

1. 100 + 60 = ________
2. 400 + 40 = ________
3. 200 + 90 = ________
4. 700 + 60 = ________
6. 500 + 80 = ________
7. 500 + 20 = ________
8. 800 + 20 = ________
9. 300 + 60 = ________
10. 700 + 70 = ________
11. 600 + 90 = ________
12. 400 + 60 = ________
13. 700 + 80 = ________
13. 700 + 80 = ________
14. 500 + 80 = ________

4 Find the result of each subtraction:

1. 190 - 90 = ________
2. 440 - 40 = ________
3. 340 - 30 = ________
4. 610 - 10 = ________
6. 570 - 70 = ________
7. 880 - 80 = ________
8. 790 - 90 = ________
9. 405 - 5 = ________
10. 207 - 7 = ________
11. 250 - 50 = ________
12. 405 - 5 = ________
13. 805 - 5 = ________
13. 805 - 5 = ________
14. 680 - 6 = ________

5 Find the second result, then connect it to the correct answer:

1. 200 + 30 •	• 300
2. 840 - 40 •	• 320
3. 300 + 20 •	• 504
4. 400 + 50 •	• 320
5. 450 - 50 •	• 400
6. 300 + 200 •	• 800

6 Find the result of each of the following:

1. 1 0 0 + 3 0 0 = ...
2. 2 0 0 + 4 0 0 = ...
3. 5 0 0 + 7 0 = ...
4. 9 0 0 + 5 = ...
5. 4 9 0 - 8 0 = ...
6. 7 5 0 - 5 0 = ...
7. 6 0 8 - 6 = ...
8. 9 3 0 - 3 0 = ...

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Your score

Lesson 8 Test Yourself

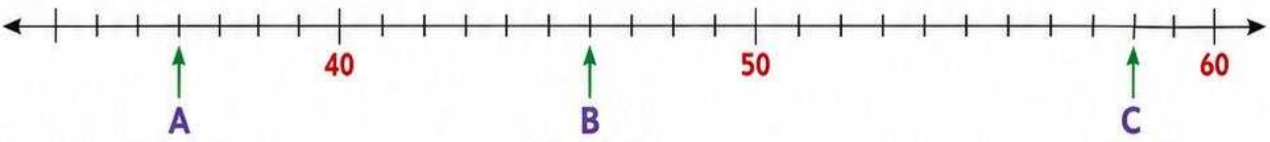
1 Complete the following:

1. 4 tens + 5 ones = ________
2. 6 tens + 2 tens = ________
3. 9 tens – 4 ones = ________
4. 7 tens – 3 ones = ________
5. The number that is less than 400 by 100 =
6. The number that is more than 150 by 30 = ________
7. The result of adding 3 tens and 8 ones = ________
8. The number that is 2 ones less than 34 = ________
9. The result of subtracting 5 tens from 101 = ________
10. The number that is 3 tens more than 47 = ________

2 Find the result of the following:

1. 200 + 300 = ________
2. 400 + 50 = ________
3. 500 + 4 = ________
4. 600 + 70 = ________
5. 80 + 28 = ________
6. 20 + 14 = ________
7. 700 – 40 = ________
8. 540 – 60 = ________
9. 100 – 26 = ________
10. 95 – 23 = ________
11. 5 + 400 = ________
12. 30 + 100 = ________
13. 100 + 200 = ________
14. 56 + 28 = ________
15. 62 – 45 = ________

3 Write the numbers represented by (A), (B) and (C) on the number line:



A .... B .... C ....

4 Read, then write the calculation operation and the answer:

1. Soad scored 100 points in a game and then earned 30 more points. What is the total number of points?

____

Operation: ....
Answer: ....

2. A coach gave his team 205 balls. The team used 5 balls. How many balls remain?

____

Operation: ....
Answer: ....

3. A shop sold 300 chocolate pieces. It sold 100 pieces of them. How many chocolate pieces are left?

____

Operation: ....
Answer: ....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Lesson 9 & 10

Numbers greater than 100 (Part 9)
Numbers greater than 100 (Part 10)

1 Learn

Comparing numbers using the symbols (< or > or =):

When comparing two numbers that have the same number of digits, compare the digits starting from the largest place value (from left to right).

Example: Compare the numbers 235 and 237 using the following steps:

Step (1)
Write the numbers in vertical form, then compare the digits in the hundreds place.

2	3	5
2	3	7

The digits are the same.

Step (2)
Compare the digits in the tens place.

2	3	5
2	3	7

The digits are the same.

Step (3)
Compare the digits in the ones place.

2	3	5
2	3	7

5 is less than 7.

Therefore: 235 < 237 or 237 > 235

Observe this

- The number formed by 3 digits is greater than the number formed by 2 digits. For example: 120 > 99
- The number formed by 3 digits is greater than the number formed by 2 digits. For example: 115 > 8

2 Compare the numbers and put the suitable symbol < or > or =:

1. 534 ☐ 527
2. 400 ☐ 346
3. 99 ☐ 207
4. 645 ☐ 648

3 How to solve

1. 346 ☐ 400 → 346 < 400
2. 534 ☐ 527 → 534 > 527
3. 648 ☐ 645 → 648 > 645
4. 207 ☐ 99 → 207 > 99

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Example 2 Ahmed has 340 pounds, and Khaled has 345 pounds.

Who has more money?

Hundreds column	Tens column	Ones column	
3	4	0	← Ahmed
3	4	5	← Khaled
3 = 3	4 = 4	0 < 5	

Solution

By comparing the two amounts, we find that:

345 [>] 340

Therefore:

Khaled has more money than Ahmed.

Example 3

Library A has 250 books,
Library B has 352 books,
Library C has 312 books.

Answer the following:

1. Compare the number of books in Library A and Library B.
2. Compare the number of books in Library B and Library C.

	Hundreds column	Tens column	Ones column
Library A	2	5	0
Library B	3	5	2
Library C	3	1	2
	3 > 2	1 < 5	

Solution

Write the three numbers vertically as shown.

From the table, we find that:

1. 352 [>] 250

   Therefore:
   The number of books in Library B is greater than in Library A.

2. 312 [<] 352

   Therefore:
   The number of books in Library B is greater than in Library C.

Try It ✓

(1) Compare the numbers using the appropriate symbol (< or > or =):

1	257	☐	260
2	854	☐	861
3	650	☐	560
4	300	☐	299
5	111	☐	98
6	306	☐	600

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

2 Learn

Comparing numbers and performing arithmetic operations using the symbols (< or > or =):

⭐ When comparing two numbers, perform the arithmetic operation, find the result, then start the comparison from the largest place value.

Examples of comparing numbers and performing arithmetic operations:

80 + 50 = 130		130
↓		↓
130	=	130

80 + 50 **equals** 130.

90 + 60 = 150		120
↓		↓
150	>	120

90 + 60 is **greater than** 120.

30 + 70 = 100		140
↓		↓
100	<	140

30 + 70 is **less than** 140.

2 Compare the numbers by placing the appropriate symbol (< or > or =):

3. 140 ☐ 90 + 40 | 2. 600 ☐ 63 – 30 | 1. 190 ☐ 70 + 80

Solution method

3. 140 → 140; 90 + 40 → 130; > ; **140 > 130**

2. 600 → 600; 63 – 30 → 63 – 30 = 33; > ; **600 > 33**

1. 190 → 190; 70 + 80 → 150; > ; **190 > 150**

3 Example

Majdy has 130 marbles, Kareem buys 60 marbles, and Hoda buys 90 marbles.

1. Find the relationship between the amount Majdy has with the total amount of Kareem and Hoda.
2. Can Majdy buy the marbles of the ball and the doll?

60 marbles

90 marbles

Solution method

	Hundreds column	Tens column	Ones column
Majdy's marbles	1	3	0
Total amount	1	5	0

0 < 5

1. Majdy has 130 marbles.
   - ⭐ The total amount = 60 + 90 = 150 marbles.
   - ⭐ The relationship is: 90 + 60 > 130
2. Majdy has **fewer** marbles than the total amount. Therefore, he **cannot** buy the marbles of the ball and the doll.

Try It ✔

Compare the numbers by placing the appropriate symbol (< or > or =):

1. 90 + 50 ☐ 140
2. 170 ☐ 80 + 30
3. 60 – 56 ☐ 500
4. 299 ☐ 300
5. 98 ☐ 111
6. 600 ☐ 306

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Homework

1 Find the result of each of the following:

60 + 80 = ____________ | 130 − 70 = ____________

200 + 800 = ____________ | 1000 − 300 = ____________

2 Compare using < or > :

(1)	600 − 400	☐	200	(7)	950 − 750	☐	300
(2)	800 − 300	☐	500	(8)	600 − 450	☐	200
(3)	900 − 500	☐	400	(9)	800 − 600	☐	200
(4)	1000 − 700	☐	300	(10)	1000 − 500	☐	600
(5)	700 − 200	☐	500	(11)	720 − 500	☐	220
(6)	1000 − 600	☐	400	(12)	890 − 390	☐	500

3 Order the following numbers from smallest to largest.

Example The order is: 248 , 367 , 458

☆ The order is: ______ , ______ , ______

☆ The order is: ______ , ______ , ______

☆ The order is: ______ , ______ , ______

(1) 258 , 367 , 468
(2) 689 , 628 , 685
(3) 938 , 951 , 954
(4) 741 , 726 , 735

4 Order the following numbers from largest to smallest.

Example The order is: 981 , 954 , 927

☆ The order is: ______ , ______ , ______

☆ The order is: ______ , ______ , ______

☆ The order is: ______ , ______ , ______

(1) 954 , 927 , 981
(2) 153 , 183 , 124
(3) 295 , 214 , 325
(4) 430 , 418 , 421

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

TEST ON UNIT 6

1 Choose the correct answer:

1) 354 ☐ 235 — (a) 354 (b) 235 (c) < (d) >
2) .... = 1 + 20 + 300 — (a) 312 (b) 313 (c) 133 (d) 321
3) .... = 5 cm 3 mm — (a) 305 (b) 503 (c) 53 (d) 35
4) 95 minutes = 1 hour and .... minutes — (a) 45 (b) 35 (c) 15 (d) 5
5) .... = 3 tens and 7 units — (a) 732 (b) 733 (c) 372 (d) 337
6) The number that is 200 more than 50 is .... — (a) 502 (b) 520 (c) 250 (d) 205

2 Find the result of the following:

1) 23 + 65 = ...
2) 90 + 71 = ...
3) 76 + 15 = ...
4) 40 – 12 = ...
5) 350 + 50 = ...
6) 100 + 9 = ...
7) 60 – 25 = ...
8) 305 – 5 = ...
9) 90 – 20 = ...

3 Use the ruler to measure the length of the following line segments:

1)

Length = ... cm ☆

2)

Length = ... cm ☆

4 Answer the following:

① Aya has 35 balls. Then she bought 28 more balls. What is the total number of balls with Aya?

Operation: ☆ .... Answer: ☆ ....

② With Mohamed 190 pounds. He wants to buy a pen for 100 pounds and a pencil for 80 pounds.

a) Write the arithmetic operation and the relationship that shows the amount with Mohamed and the total cost.

....

....

b) Can Mohamed buy the pen and the pencil?

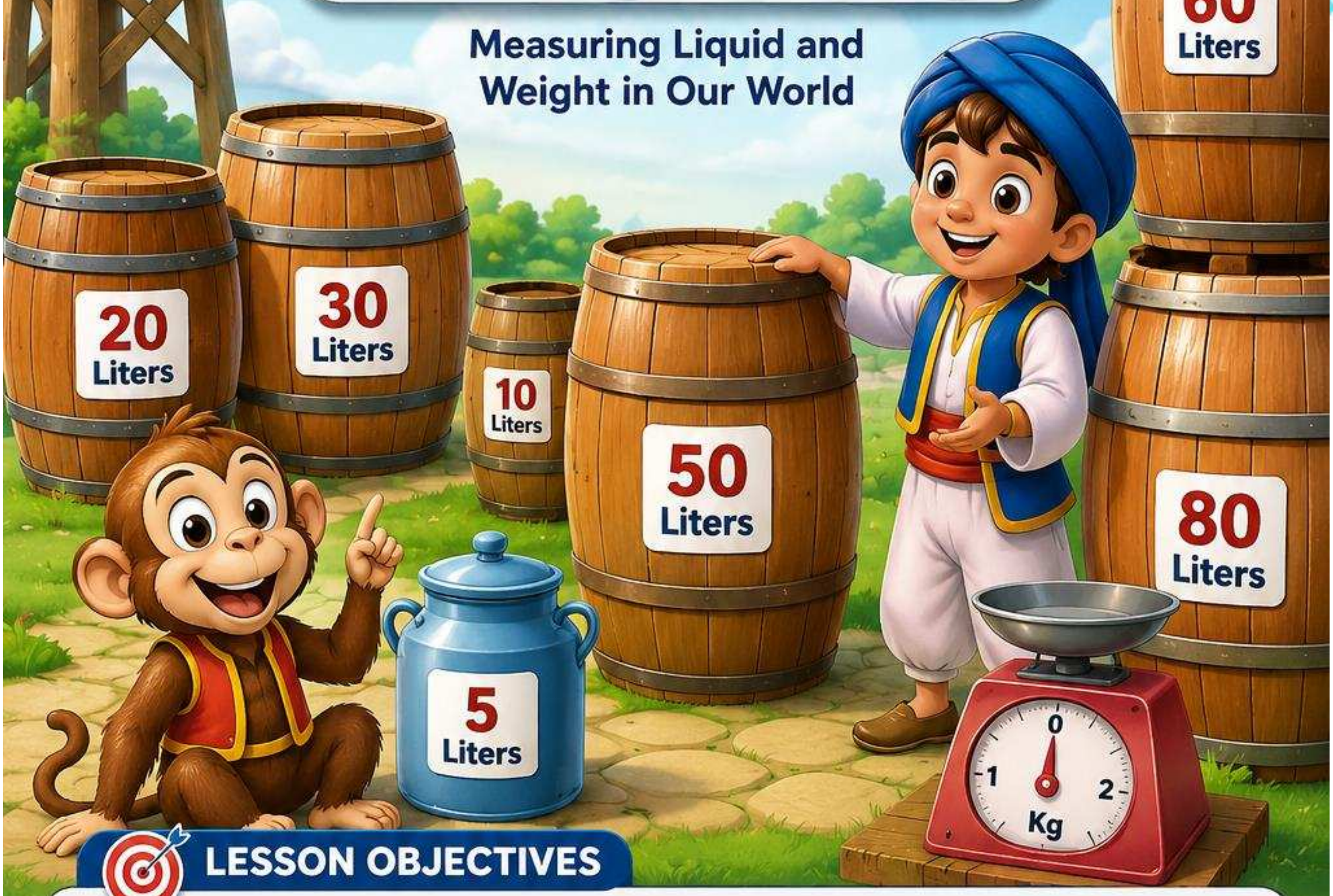
....

★ ★ ★

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Chapter 7 Units of Capacity

Measuring Liquid and Weight in Our World



LESSON OBJECTIVES

Lesson (1): The Deciliter (dl) and Liter (l)

- Recognize the deciliter and liter units.
- Write equivalent quantities using the deciliter and liter units.
- Compare quantities using the deciliter and liter units.

Lesson (2): The Kilogram (kg) and Gram (g)

- Recognize the kilogram and gram units.
- Write equivalent quantities using the kilogram and gram units.
- Convert quantities between the kilogram and gram units.
- Express quantities in kilograms and grams.

Lesson (3): The Milliliter (ml) and Liter (l)

- Recognize the milliliter and liter units.
- Write equivalent quantities using the milliliter and liter units.
- Convert quantities between the milliliter and liter units.
- Calculate capacity by combining like units.

Lesson (4): The Metric Ton (t) and Gram (g)

- Recognize the metric ton and gram units.
- Write equivalent quantities using the metric ton and gram units.
- Convert quantities between the metric ton and gram units.
- Calculate weight by combining like units.

You can do it! Keep moving forward!

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

1 DECILITER (dl) AND LITER LESSON

Learn

The deciliter (dl):

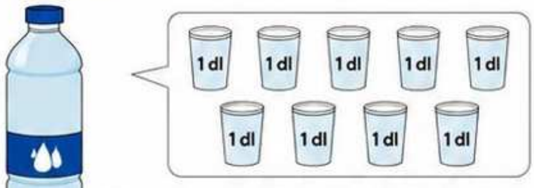
☆ **A liter:** It is the amount of material that can fill a container completely. It can be expressed in terms of the capacity of water or other liquids using the unit liter.

☆ **A deciliter (dl):** It is one tenth of the liter.

1 dl	1 dl	1 dl	1 dl	1 dl	1 dl	1 dl	1 dl	1 dl	1 dl	=	1 L

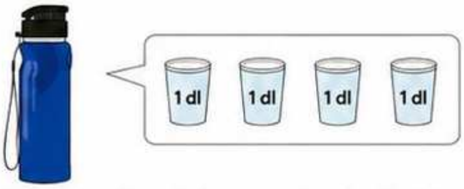
The amount of water that a container can hold or store is called its capacity or its measure, and we use a measuring cup with a capacity of 1 deciliter.

For example



The capacity of the water in the bottle equals (10 deciliters).

The bottle's capacity is 10 deciliters.
(Because it equals 10 times the capacity of the 1 dl measuring cup)



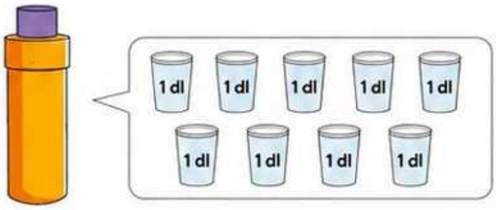
The capacity of the water in the flask equals (4 deciliters).

The flask's capacity is 4 deciliters.
(Because it equals 4 times the capacity of the 1 dl measuring cup)

Example 1

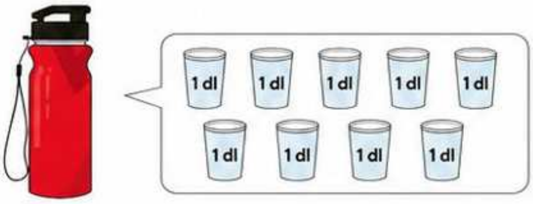
1 Observe the pictures below, then write the capacity of the water in each one using a measuring cup.

1



Capacity = ________ deciliters

2



Capacity = ________ deciliters

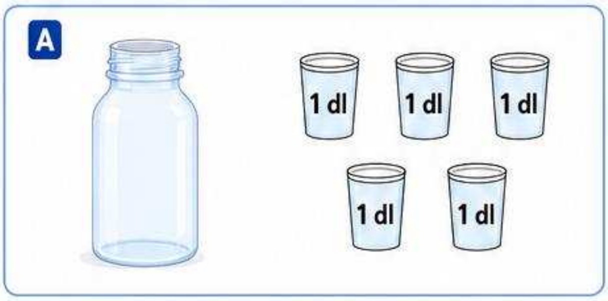
Solution method

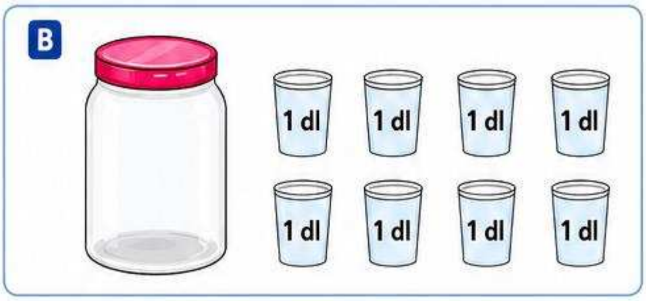
① 8 deciliters → Because the flask's capacity equals 8 times the capacity of the 1 dl measuring cup.

② 10 deciliters → Because the flask's capacity equals 10 times the capacity of the 1 dl measuring cup.

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Example 2 Observe the pictures, then answer:





1 What is the capacity of the water that jar A holds in deciliters, arranged in order?

....

2 To fill the jar, does it need more water, jar A or jar B? ....

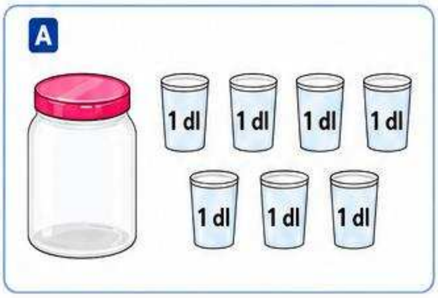
Solution method

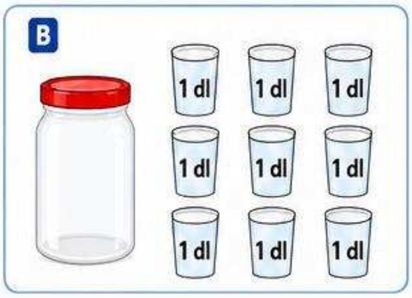
1 ☆ The capacity of the water that jar A holds equals 7 deciliters.

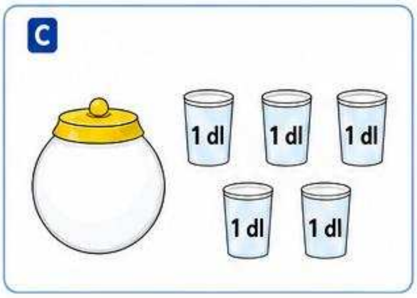
☆ The capacity of the water that jar B holds equals 8 deciliters.

2 Jar A needs more water. (Because 8 deciliters is greater than 7 deciliters.)

Example 3 Write the capacity of each container, then arrange them from the largest capacity to the smallest:





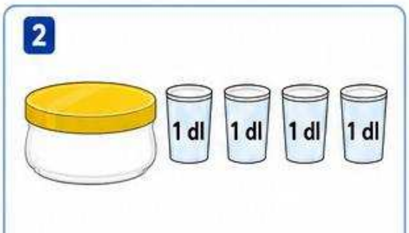


☆ The capacity of jar A = _____ deciliters. ☆ The capacity of jar B = _____ deciliters. ☆ The capacity of jar C = _____ deciliters.

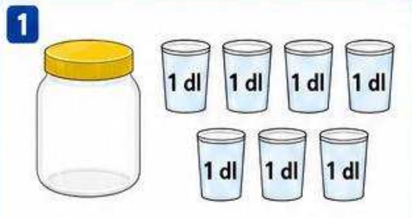
☆ Arrange: _______ , _______ , _______ (from largest to smallest)

Try It ✔ Write the capacity of the water that each container holds using number of cups:

Capacity = _______ deciliters



Capacity = _______ deciliters

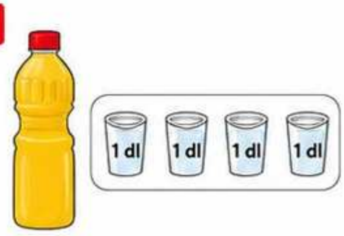


Capacity = _______ deciliters

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Homework

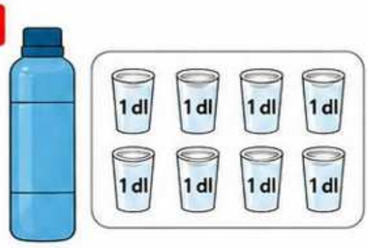
1 Write the capacity of the water in each container in deciliters:

1


Capacity = ______ deciliters

2

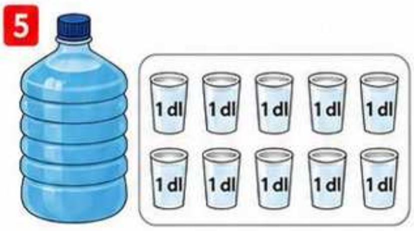
Capacity = ______ deciliters

3


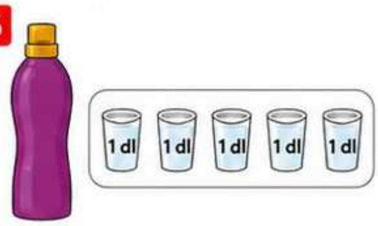
Capacity = ______ deciliters

4

Capacity = ______ deciliters

5


Capacity = ______ deciliters

6


Capacity = ______ deciliters

2 Match each container with the number of deciliters.

1

4 deciliters

2

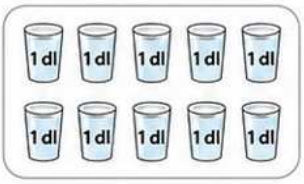
10 deciliters

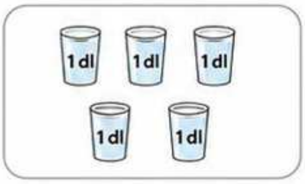
3

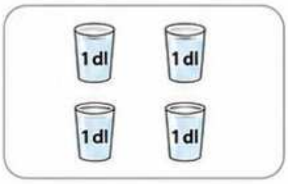
5 deciliters

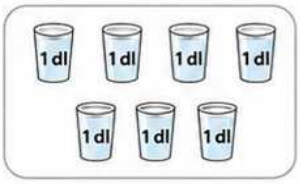
4

7 deciliters









3 Write the capacity of the water in (a) and (b), then complete:

(a)

(b)

- ☆ The capacity of (a) = ______ deciliters
- ☆ The capacity of (b) = ______ deciliters
- ☆ (b) is greater than (a) in capacity by ______ deciliters
- ☆ (a) is less than (b) in capacity by ______ deciliters

(a)

(b)

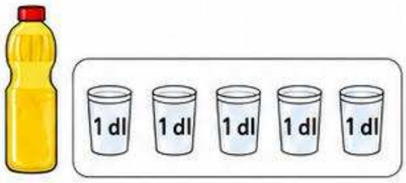
- ☆ The capacity of (a) = ______ deciliters
- ☆ The capacity of (b) = ______ deciliters
- ☆ (a) is greater than (b) in capacity by ______ deciliters
- ☆ (b) is less than (a) in capacity by ______ deciliters

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Your score

1 TEST YOURSELF

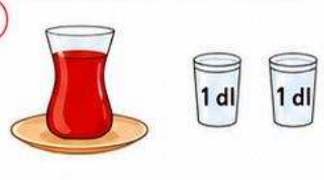
1 Complete the following:



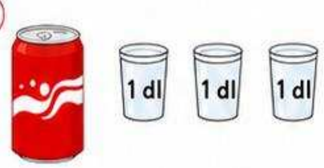
1) The number of measuring cups of capacity 1 deciliter needed to get 5 deciliters is .... cups.
2) The capacity of the water in the jug equals .... deciliters.
3) The number which is 120 more than 5 is ....
4) 25 + 14 = ... + 25
5) 22 dm = ... cm and .... mm
6) Write the number 358 in words.

....

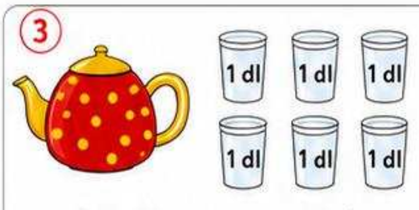
2 Write the capacity of the following containers in deciliters:

① 

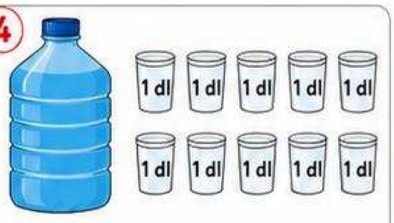
Capacity = ... dl ☆

② 

Capacity = ... dl ☆

③ 

Capacity = ... dl ☆

④ 

Capacity = ... dl ☆

⑤

Capacity = ... dl ☆

⑥

Capacity = ... dl ☆

3 When measuring the capacity of water in the jugs (a) and (b):

Jug (a)

Jug (b)

① How much is the capacity of the water in jug (a) and jug (b) in deciliters? Arrange them in order.

Jug (a) = ... dl Jug (b) = ... dl

Ordering: .... <or> > ....

② Which jug has a greater capacity, jug (a) or jug (b)?

....

4 Read, then write the arithmetic operation and the answer:

Malek has 70 pounds, and his uncle has 50 pounds.

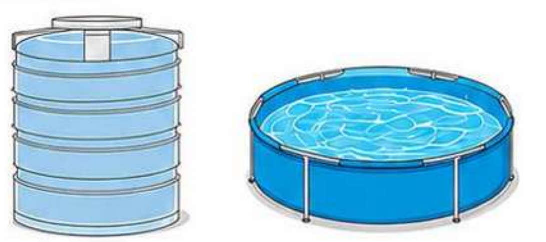
What is the total amount of money with Malek?

Answer: .... ☆

★ ★ ★

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

LESSON 2 LITERS (L) AND DECILITERS (dl)



Learn:

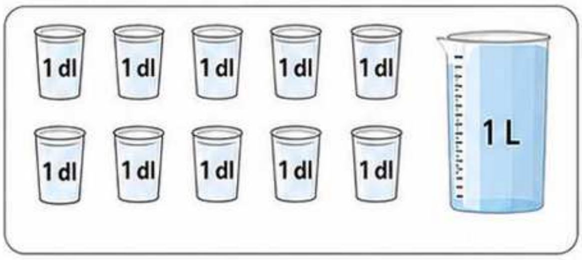
- ★ A liter (L) is a unit for measuring large capacities.
- ★ Properties of water:
  Water has no shape of its own.
  It takes the shape of its container.

Example: The water tanks, water reservoirs are properties of water, and we write their capacity in (L).

L L L	L L L	L

★ 1 measuring cup holds the same amount of water as 10 cups of 1 deciliter.

So 1 measuring cup = 1 deciliter.



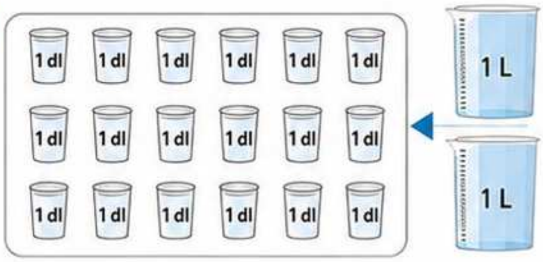
That is, each small mark on the 1-liter measuring cup represents 1 dl.

That is:

________ ⟷ (written / shortly) ________

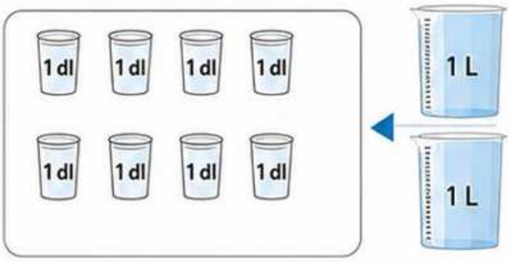
1 Write the capacity of the water in liters and deciliters in each of the following:
(Each small mark represents 1 dl)

1



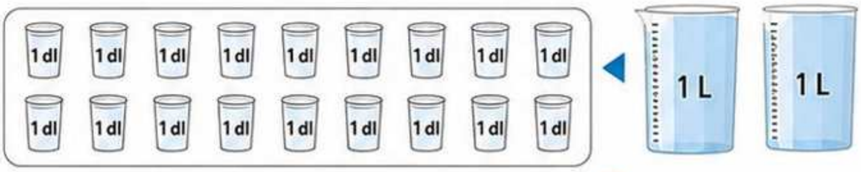
______ L ______ dl

2



______ L ______ dl

Try it Find the capacity of the water in liters and deciliters in each of the following, then match them with their capacity in deciliters.



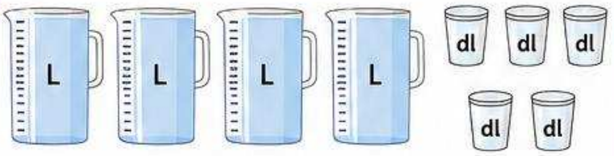
______ L ______ dl

= ______ dl

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

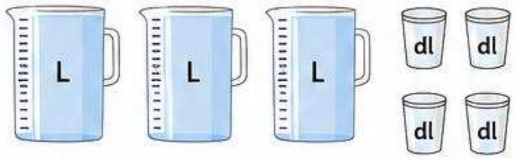
Example 2 Write the capacity of the water in liters and deciliters, or deciliters only, for each of the following:

2



______ L ______ dl

1



______ L ______ dl

Solution Method

1 3 jugs of 1 liter
or 30 deciliters = 5 deciliters + 35 deciliters

3 jugs from 1 liter
or 30 deciliters
and 5 cups of 1 deciliter → ______ deciliters

or 30 deciliters + 5 deciliters = 35 deciliters

2 4 jugs of 1 liter
or 40 deciliters = 8 deciliters + 48 deciliters

4 jugs from 1 liter
or 40 deciliters
and 8 cups up to 8 deciliters → ______ deciliters

or 40 deciliters + 8 deciliters = 48 deciliters

Example 3 Complete the following:

1 The number of 1-liter measuring cups that are needed to get 4 liters is ______ .

2 5 L = ______ dl

3 9 L = ______ dl

4 30 dl = ______ L

5 70 dl = ______ L

6 3 tens of dl = ______ dl

7 52 dl = ______ tens ______ deciliters

Solution Method

1 (1 L + 1 L + 1 L + 1 L = 4 L) → 4 times

2 5 L = 50 dl

3 9 L = 90 dl

4 30 dl = 3 L

5 70 dl = 7 L

6 3 tens of dl = 30 dl

7 52 dl = 5 tens 2 deciliters → 5 tens 2 deciliters

Practice **2** Complete the following:

1 8 L = ______ dl

2 50 dl = ______ L

3 8 tens of dl = ______ dl

4 28 dl = ______ tens ______ deciliters

Solve **2** Complete the following:

1 8 L = ______ dl

2 50 dl = ______ L

3 8 tens of dl = ______ dl

4 28 dl = ______ tens ______ deciliters

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Homework

1 **Choose the appropriate unit of capacity for each of the following:**

①
(liter, deciliter)

②
(liter, deciliter)

③
(liter, deciliter)

④
(liter, deciliter)

⑤
(liter, deciliter)

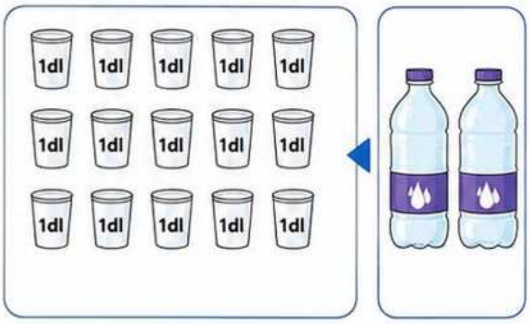
⑥
(liter, deciliter)

2 **Match each item with its appropriate capacity:**

④
③
②
①

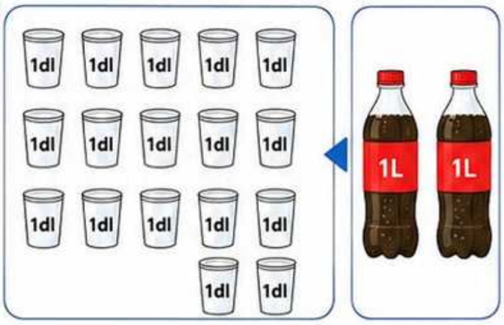
1 liter • 9 deciliters • 2 deciliters • 9 liters

3 **Write the capacity of the containers in liters and deciliters and match them with their units of capacity:**

② 

Capacity = ... liter .... deciliter ☆

.... deciliter = ... deciliters

① 

Capacity = ... liter .... deciliter ☆

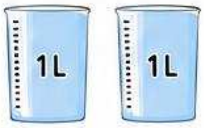
.... deciliter = ... deciliters

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

4 Solve as in the example:

Example

1 liter ☆
10 deciliters ☆

① 

= ________ liters ☆
= ________ deciliters ☆

②

= ________ liters ☆
= ________ deciliters ☆

③

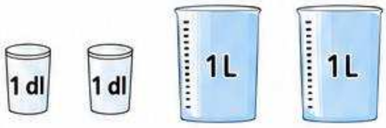
= ________ liters ☆
= ________ deciliters ☆

④

= ________ liters ☆
= ________ deciliters ☆

⑤

= ________ liters ☆
= ________ deciliters ☆

⑥ 

= ________ liters ☆
= ________ deciliters ☆

⑦

= ________ liters ☆
= ________ deciliters ☆

⑧

= ________ liters ☆
= ________ deciliters ☆

5 Write the missing number in each of the following:

① 1 liter = ______ deciliters
② 2 deciliters = ______ liters
③ 3 liters = ______ deciliters
④ 4 liters = ______ deciliters
⑤ 5 deciliters = ______ liters
⑥ 7 liters = ______ deciliters
⑦ 9 liters = ______ deciliters
⑧ 10 deciliters = ______ liters
⑨ 20 liters = ______ deciliters
⑩ 40 liters = ______ deciliters
⑪ 20 deciliters = ______ liters
⑫ 40 liters = ______ deciliters
⑬ 50 liters = ______ deciliters
⑭ 70 deciliters = ______ liters
⑮ 90 liters = ______ deciliters
⑯ 80 liters = ______ deciliters
⑰ 60 deciliters = ______ liters
⑱ 30 liters = ______ deciliters

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

4 Complete as in the example:

Example

1 L

1 L = 10 dL

①

.... L

.... dL

②

.... L

.... dL

③

.... L

.... dL

④

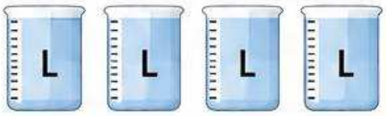
.... L

.... dL

⑤

.... L

.... dL

⑥ 

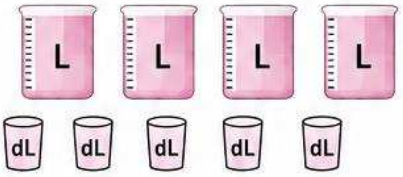
.... L

.... dL

⑦

.... L

.... dL

⑧ 

.... L

.... dL

5 Write the missing number in each of the following:

1. 1 L = ... dL
2. 2 L = ... dL
3. 3 L = ... dL
4. 4 L = ... dL
5. 5 L = ... dL
6. 7 L = ... dL
7. 9 L = ... dL
8. 10 L = ... dL
9. 20 L = ... dL
10. 40 dL = ... L
11. 20 dL = ... L
12. 30 L = ... dL
13. 50 dL = ... L
14. 70 dL = ... L
15. 90 dL = ... L
16. 80 dL = ... L
17. 60 dL = ... L
18. 30 dL = ... L
19. 40 L = ... dL
20. 40 L = ... dL

Note: 1 L = 10 dL | L : Liter | dL : Deciliter

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Put Your Sticker Here

Up to Lesson 2

Test Yourself

1 Choose the correct answer:

1. 9 L = ... dL (900 , 90 , 99 , 9)
2. 60 dL = ... L (666 , 600 , 66 , 6)
3. 4 L 9 dL = ... dL (450 , 540 , 45 , 54)
4. 36 dL = ... L
5. The appropriate unit to measure the capacity of (6 L , 3 dL , 30 L , 60 L and 30 dL) is ....
(liter , deciliter , meter , cm)

2 Compare using (<) or (>) or (=):

1. 617 671
2. 300 .... 50 – 350
3. 265 99
4. 200 + 100 360

3 Write the water capacity in liters and deciliters and what can be filled with deciliters in each case:

1.

In liters : .... ☆
In deciliters : .... ☆

2.

In liters : .... ☆
In deciliters : .... ☆

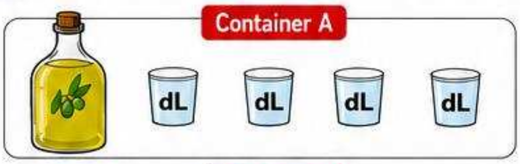
3.

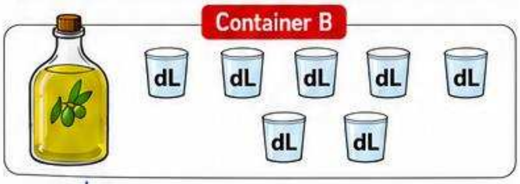
In liters : .... ☆
In deciliters : .... ☆

4.

In liters : .... ☆
In deciliters : .... ☆

4 When measuring the capacity of oil in containers A and B:





1. How many deciliters of oil are in container A (oil) and container B (vinegar)?
Arrange in descending order by deciliters.
....
2. Which container has more oil, container A or B?
....

Note: 1 L = 10 dL | L : Liter | dL : Deciliter

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

UNIT 3 LITERS (L) AND CAPACITY LESSON 3

Learn 1 Liters (L):

☆ A liter is a unit for measuring small capacities.

Examples: Medicines, small bottles, and some jars are measured in liters (L).

1 L	1 L	1 L

1 L	1 L	1 L

1 L

Since: 1 liter = 1000 milliliters —we write in short→ 1 L = 1000 mL

☆ The opposite cup to 1 deciliter is divided into 10 equal parts, each mark represents 10 mL.

The shaded part represents 10 mL

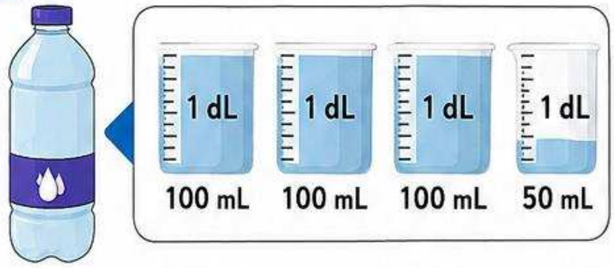
Therefore:

1 deciliter = 100 milliliters —we write in short→ 1 dL = 100 mL

Example 1 Write the water capacity in deciliters and milliliters for each of the following:

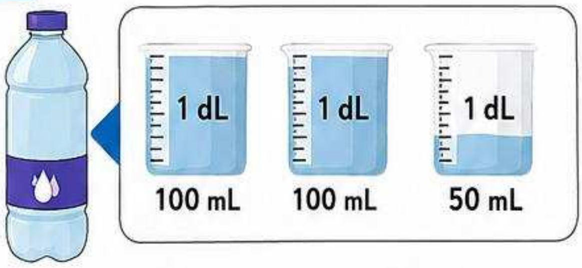
(Each small mark represents 10 milliliters)

1



deciliters = ... milliliters = ...

2



deciliters = ... milliliters = ...

Way to Solve

1. 2 deciliters and 50 milliliters = → 250 milliliters = 2 dL and 50 mL
2. 3 deciliters and 80 milliliters = → 380 milliliters = 3 dL and 80 mL

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Example 2 Complete the following:

1. 4 deciliters = ... milliliters
2. 8 deciliters = ... milliliters
3. 700 milliliters = ... deciliters
4. 900 milliliters = ... deciliters
5. 8 deciliters and 60 milliliters = ... milliliters
6. 540 milliliters = ... deciliters and .... milliliters

Way to Solve

1. 4 deciliters = 400 milliliters

When converting from deciliters to milliliters, put two zeros at the end of the number.

2. 8 deciliters = 800 milliliters

When converting from deciliters to milliliters, put two zeros at the end of the number.

3. 700 milliliters = 7 deciliters

When converting from milliliters to deciliters, remove two zeros from the end of the number.

4. 900 milliliters = 9 deciliters

When converting from milliliters to deciliters, remove two zeros from the end of the number.

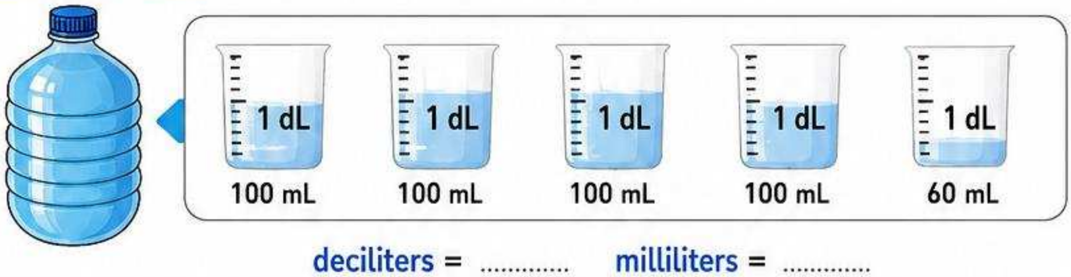
5. 8 deciliters and 60 milliliters = 860 milliliters

Convert 8 deciliters to milliliters: 8 → 800, then add 60.

6. 540 milliliters = 5 deciliters and 40 milliliters

Convert 540 milliliters to deciliters and milliliters: 540 → 5 deciliters and 40 milliliters.

Try it 1 Write the water capacity in deciliters and milliliters:



deciliters = ... milliliters = ...

Try it 2 Complete the following:

1. 3 deciliters = ... milliliters
2. 9 deciliters = ... milliliters
3. 500 milliliters = ... deciliters
4. 4 deciliters and 70 milliliters = ... milliliters
5. 680 milliliters = ... deciliters and .... milliliters
6. 1000 milliliters = ... deciliters

Note: 1 L = 10 dL | L: Liter | dL: Deciliter | mL: Milliliter

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Learn 2 Adding Capacities:

☆ When adding capacities, we add the similar units together.
(Liters (L) with liters and deciliters (dL) with deciliters).

Example 8 L and 7 dL – 2 L → 6 L and 7 dL =

Example 7 L and 2 dL + 6 dL → 7 L and 8 dL =

Example 3 Find the results of the following:

1. 4 L and 6 dL + 3 L = ...
2. 7 L and 2 dL + 5 dL = ...
3. 5 L and 3 dL – 5 dL = ...
4. 9 L and 7 dL – 1 dL = ...

Way to Solve

☆ First, we add or subtract the numbers with the similar units together.

1. 4 L and 6 dL + 3 L = 7 L and 6 dL
   4 L + 3 L = 7 L
   6 dL = 6 dL
2. 7 L and 2 dL + 5 dL = 7 L and 7 dL
   7 L = 7 L
   2 dL + 5 dL = 7 dL
3. 5 L and 3 dL – 5 dL = 5 L and 3 dL – 5 dL = 5 L and 8 dL
   5 L = 5 L
   3 dL – 5 dL = 8 dL
   (Borrow 1 L = 10 dL)
4. 9 L and 7 dL – 1 dL = 9 L and 6 dL
   9 L = 9 L
   7 dL – 1 dL = 6 dL

Try it 3 ☑ Calculate the following:

1. 8 L and 5 dL + 1 L = ...
2. 3 L and 6 dL – 6 dL = ...
3. 3 L and 6 dL – 6 dL = ...
4. 6 L and 3 dL – 6 dL = ...

Note: 1 L = 10 dL | L: Liter | dL: Deciliter

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Learn 3 Solving Word Problems on Capacity

Example 4 Read the problem, then write the calculation and the answer with the unit:

There are 3 liters of water in one container, and 2 deciliters of water in another container, and 7 deciliters of water. What is the total amount of water in the two containers?

Solution

To find the total amount of water in the two containers, we use the addition operation, then we add the similar units.

☆ **Calculation:** 3 L and 2 dL + 7 dL

☆ **Answer:** 3 L and 9 dL ← Write the unit in the answer.

Remember

☆ Key words for the addition operation are:

The sum | The total | Altogether

Example 5 Read the problem, then write the calculation and the answer with the unit:

Hisham bought a bottle of orange juice whose capacity is 2 liters, then he drank 5 deciliters of it, then he poured 4 deciliters. Calculate the remaining amount of juice in the bottle.

Solution

To find the remaining amount of juice in the bottle, we use the subtraction operation, then we subtract the similar units.

☆ **Calculation:** 2 L and 5 dL − 4 dL

☆ **Answer:** 2 L and 1 dL ← Write the unit in the answer.

Remember

☆ Key words for the subtraction operation are:

The remainder | Difference | More

Example 6 Read the problem, then write the calculation and the answer with the unit:

I have a bottle of water whose capacity is 4 liters and 5 deciliters, and I bought another bottle of water whose capacity is 2 liters. What is the total amount of water I have?

Solution

☆ **Calculation:** 4 L and 5 dL + 2 L

☆ **Answer:** 6 L and 5 dL ← Write the unit in the answer.

Example 7 Read the problem, then write the calculation and the answer with the unit:

A tank contains 9 liters and 8 deciliters of water. I used 5 liters of it. What is the remaining amount of water in the tank?

Solution

☆ **Calculation:** 9 L and 8 dL − 5 L

☆ **Answer:** 4 L and 8 dL ← Write the unit in the answer.

Practice 4 Read each problem, then write the calculation and the answer with the unit:

1 I have a tank whose capacity is 4 liters and 5 deciliters, and I bought another bottle of water whose capacity is 2 liters. What is the total amount of water I have?	Calculation: ________	Answer: ________
2 A tank contains 9 liters and 8 deciliters of water. I used 5 liters of it. What is the remaining amount of water in the tank?	Calculation: ________	Answer: ________

Remember When adding or subtracting numbers with the same unit, we add or subtract the digits and keep the same unit.

1 L = 10 dL	L: Liter
dL: Deciliter	mL: Milliliter

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Homework

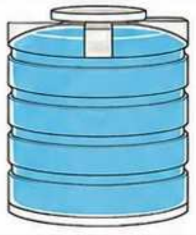
1 Convert the following units to the suitable unit of capacity in each case:

1.

(............... , milliliters)

2.

(............... , milliliters)

3. 

(............... , milliliters)

4.

(............... , milliliters)

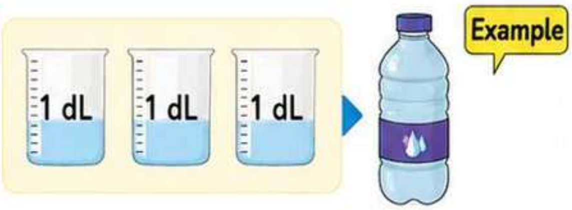
5.

(............... , milliliters)

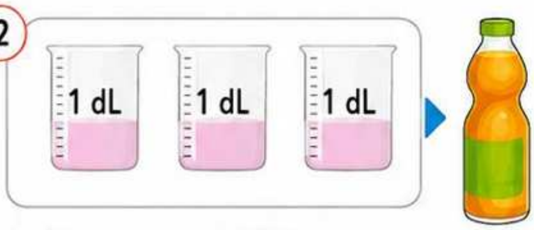
6.

(............... , milliliters)

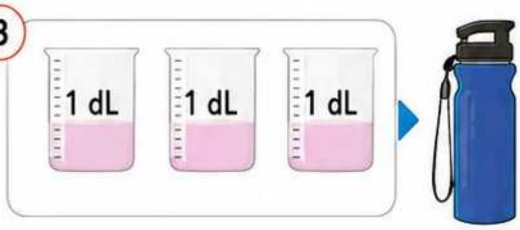
2 Write the following measurements in deciliters and milliliters, and in milliliters as in the example:

1. 

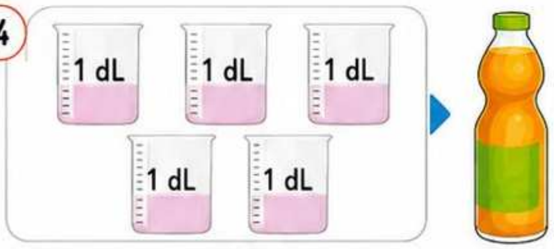
2 deciliters 50 milliliters = 250 ml

2. 

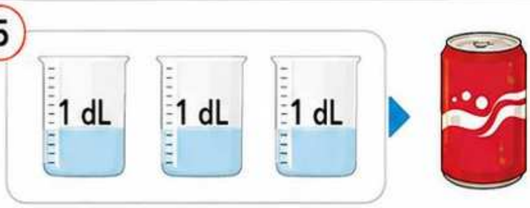
deciliters .... milliliters = ... ml ☆

3. 

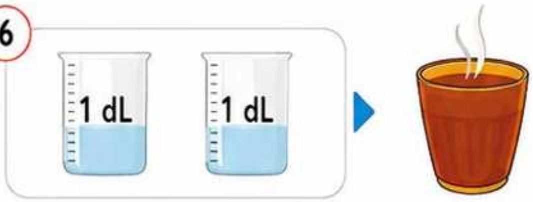
deciliters .... milliliters = ... ml ☆

4. 

deciliters .... milliliters = ... ml ☆

5. 

deciliters .... milliliters = ... ml ☆

6. 

deciliters .... milliliters = ... ml ☆

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

3 Write the missing numbers in each of the following:

1. 1 liter = ... mL
2. 2 deciliters = ... mL
3. 3 deciliters = ... mL
4. 6 deciliters = ... mL
5. 9 deciliters = ... mL
6. 100 milliliters = ... mL
7. 100 mL = ... dL
8. 200 mL = ... dL
9. 400 mL = ... dL
10. 700 mL = ... dL
11. 800 mL = ... dL
12. 1000 milliliters = ... L

4 Complete the following:

1. 4 deciliters and 80 milliliters = ... mL
2. 5 deciliters and 10 milliliters = ... mL
3. 6 deciliters and 20 milliliters = ... mL
4. 7 deciliters and 80 milliliters = ... mL
5. 8 deciliters and 30 milliliters = ... mL
6. 9 deciliters and 70 milliliters = ... mL
7. 490 mL = ... dL and .... mL
8. 590 mL = ... dL and .... mL
9. 120 mL = ... dL and .... mL
10. 240 mL = ... dL and .... mL
11. 340 mL = ... dL and .... mL
12. 690 mL = ... dL and .... mL
13. 720 mL = ... dL and .... mL
14. 690 mL = ... dL and .... mL
15. 1 L 20 mL = ... dL and .... mL
16. 1 L 50 mL = ... dL and .... mL

5 Calculate the capacity:

1. 6 L and 2 deciliters + 3 L = ... = ...
2. 5 L and 2 deciliters + 3 L = ... = ...
3. 4 L and 5 deciliters + 2 L = ... = ...
4. 7 L + 4 L and 7 deciliters = ... = ...
5. 2 L and 1 deciliter + 8 L = ... = ...
6. 6 L and 2 deciliters + 1 L = ... = ...
7. 9 L and 3 deciliters + 5 deciliters = ... = ...
8. 4 L and 5 deciliters + 5 deciliters = ... = ...
9. 3 L and 5 deciliters – 2 L = ... = ...
10. 8 L and 9 deciliters – 5 L = ... = ...
11. 7 L and 4 deciliters – 7 L = ... = ...
12. 9 L – 9 deciliters = ... = ...
13. 2 L and 8 deciliters – 2 L = ... = ...
14. 5 L and 7 deciliters – 3 L = ... = ...
15. 4 L and 7 deciliters – 7 deciliters = ... = ...
16. 8 L and 2 deciliters – 7 deciliters = ... = ...

Remember When adding or subtracting quantities with the same unit, we add or subtract the numbers and keep the same unit.

Unit Equivalents

- 1 L (liter) = 1000 mL
- 1 dL (deciliter) = 100 mL
- 1 mL (milliliter) = 1 mL

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Test on Unit 7

Name : .... Class : .... Date : ..../......../........

1 Choose the correct answer:

1. 5 deciliters and 30 ml = ... ml
   (530 , 350 , 305 , 35)
2. 3 units 4 tens and 6 units = ...
   (364 , 436 , 634 , 643)
3. 1 hour and 30 minutes = ... minutes
   (130 , 90 , 70 , 60)
4. 235 238
   (> , < , = , not one of these)
5. 23 tens = ...
   (123 , 32 , 230 , 33)
6. 1 hour and 30 minutes = ... minutes
   (130 , 90 , 70 , 60)
7. 100 ml = ... dL
   (200 , 400 , 700 , 1000)
8. 200 ml = ... dL
   (200 , 400 , 700 , 1000)
9. 400 ml = ... dL
   (200 , 400 , 700 , 1000)
10. 700 ml = ... dL
    (200 , 400 , 700 , 1000)
11. 800 ml = ... dL
    (200 , 400 , 700 , 1000)
12. 1000 milliliters = ... L
    (1 , 10 , 100 , 1000)

2 Complete the following:

1. The number 506 consists of .... units .... tens .... hundreds
2. 5 cm and 3 mm + 4 mm = ... cm
3. The number of hours in the morning period = ... hours
4. 300 ml = ... dL
5. The number of hours in the morning period = ... hour
6. 1000 ml = ... L
7. 100 ml = ... dL
8. 200 ml = ... dL
9. 400 ml = ... dL
10. 700 ml = ... dL
11. 800 ml = ... dL
12. 1000 milliliters = ... L

3 Find the result:

1. 43 + 38 = ...
2. 59 + 12 = ...
3. 49 + 50 = ...
4. 60 + 20 = ...
5. 49 − 27 = ...
6. 50 − 27 = ...
7. 40 − 34 = ...
8. 78 − 28 = ...

4 Read, then write the calculation and the answer:

1. Malak has 90 pounds and spends 50 pounds. What is the total amount she has left?
   Calculation: ....
   Answer: .... (with unit)
2. Zahra bought a juice whose capacity is 2 liters and 5 deciliters. Then she drank 4 deciliters of it. What is the remaining amount of juice?
   Calculation: ....
   Answer: .... (with unit)

5 Read, then write the calculation and the answer:

1. Malak has 90 pounds and takes 50 pounds from it. What is the total amount she has?
   Calculation: ....
   Answer: .... (with unit)
2. Zahra bought a juice whose capacity is 2 liters and 5 deciliters. Then she took 4 deciliters from it. What is the amount of juice left?
   Calculation: ....
   Answer: .... (with unit)

Remember When adding or subtracting quantities with the same unit, we add or subtract the numbers and keep the same unit.

Unit Equivalents
- 1 L (liter) = 1000 mL
- 1 dL (deciliter) = 100 mL
- 1 mL (milliliter) = 1 mL

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Chapter 8 Addition and Subtraction

Using the Standard Algorithm

LESSON OBJECTIVES

Lesson (1): Addition and Subtraction Using the Standard Algorithm (Part 1)

- Add two two-digit numbers with regrouping in the ones place.
- Add two two-digit numbers with regrouping in the tens place.

Lesson (2): Addition and Subtraction Using the Standard Algorithm (Part 2)

- Subtract two two-digit numbers with regrouping in the ones place.
- Subtract two two-digit numbers with regrouping in the tens place.

Lesson (3): Addition and Subtraction Using the Standard Algorithm (Part 3)

- Addition with the Standard Algorithm (Part 4)
- Subtraction with the Standard Algorithm (Part 5)
- Addition and Subtraction with the Standard Algorithm (Part 6)

- Add two two-digit numbers with regrouping in the hundreds place.
- Subtract two two-digit numbers with regrouping in the hundreds place.
- Add two two-digit numbers with regrouping in both the ones and tens places.
- Subtract two two-digit numbers with regrouping in both the ones and tens places.

Lesson (4): Addition and Subtraction Using the Standard Algorithm (Part 6)

- Add a two-digit number and another number with three digits.
- Subtract a two-digit number from another number with three digits.

You can do it! Keep learning and achieve more!

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

LESSON 1 & 2 ADDITION AND SUBTRACTION USING THE STANDARD METHOD (PART 1 & PART 2)

Adding two numbers again

Learn

First Adding two numbers again inside a ten:

When the sum of the tens digits is 9, we carry 1 to the hundreds place.

Example We can find the sum of 57 + 52 using place value (standard method) as follows:

1 Write the numbers one under the other according to place value

Hundreds place	Tens place	Ones place
	7	6
	5	2

2 Add the ones digits
6 = 2 + 4

Hundreds place	Tens place	Ones place
	7	6
	5	2
		8

3 Add the tens digits
8 = 2 + 6

Hundreds place	Tens place	Ones place
	7	6
	5	2
1	2	8

Write 1 in the hundreds place

Therefore: 57 + 52 = 128

1 Example 1 Find the sum of each of the following using the standard method:

3) 72 + 77 **3** 2) 33 + 84 **2** 1) 41 + 63 **1**

Method (Solution)

Start by adding the ones digits, then add the tens digits with carrying to the hundreds place.

3

Hundreds place	Tens place	Ones place
	7	2
	7	7
1	4	9

72 + 77 = 149

Hundreds place	Tens place	Ones place
	3	3
	8	4
1	1	7

33 + 84 = 117

1

Hundreds place	Tens place	Ones place
	4	1
	6	3
1	0	4

41 + 63 = 104

2 Solution Find the sum of each of the following:

3) 77 + 80 **3** ....

2) 46 + 91 **2** ....

1) 53 + 62 **1** ....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Adding two numbers again

Learn

Second — Adding two numbers again inside the tens and ones places:

When the sum of the ones digits is 9, we carry 1 to the tens place, and when it exceeds 9, we carry the sum of the tens digits to the tens place.

Example We can find the sum of 63 + 87 using the standard method (place value) as follows:

1 Write the numbers one under the other according to place value

Hundreds place	Tens place	Ones place
	6	3
+	8	7

2 Add the ones digits inside the ones place
3 + 7 = 10
Write 0 in the ones place and carry 1 to the tens place

Hundreds place	Tens place	Ones place
	6	3
+	8	7
	1	0

3 Add the ones digits inside the tens and ones places
1 + 6 + 8 = 15
Write 5 in the ones place and carry 1 to the tens place

Hundreds place	Tens place	Ones place
	6	3
+	8	7
	1	5

Write 1 in the tens place

Therefore: 63 + 87 = 150

Example 2 Find the sum of each of the following using the standard method:

1) 57 + 46 2) 37 + 73 3) 99 + 52

Method (Solution)

Start by adding the ones digits, then add the tens digits with carrying to the tens place.

1) 57 + 46

Hundreds place	Tens place	Ones place
	5	7
+	4	6
1	0	3

57 + 46 = 103

2) 37 + 73

Hundreds place	Tens place	Ones place
	3	7
+	7	3
1	1	0

37 + 73 = 110

3) 99 + 52

Hundreds place	Tens place	Ones place
	9	9
+	5	2
1	5	1

99 + 52 = 151

Solve Find the sum of each of the following:

1) 51 + 49 .... 2) 64 + 66 .... 3) 88 + 99 ....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Homework

1 Find each sum by regrouping in the ones:

7 1 + 6 0	4 5 + 8 3	3 2 + 7 2	5 6 + 6 1
....	....	....	....

2 7 + 9 2	4 3 + 6 3	5 2 + 5 1	5 1 + 7 7
....	....	....	....

3 4 + 8 3	4 3 + 9 2	8 7 + 8 0	6 4 + 6 4
....	....	....	....

2 2 + 9 6	3 5 + 7 4	4 5 + 6 3	6 1 + 7 4
....	....	....	....

2 Find each sum using the standard method:

82 + 33 ....   54 + 65 ....   51 + 52 ....

69 + 40 ....   71 + 68 ....   60 + 49 ....

39 + 70 ....   76 + 33 ....   95 + 43 ....

3 Find each sum:

75 + 91 ....   38 + 90 ....   55 + 83 ....   84 + 21 ....

Remember: When adding or subtracting quantities with the same unit, we add or subtract the numbers and keep the same unit.

Unit Equivalents

- 1 L (liter) = 1000 mL
- 1 dL (deciliter) = 100 mL
- 1 mL (milliliter) = 1 mL

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

4 Find each sum using the standard method:

(1) 85 + 34 =

Hundreds	Tens	Ones	
....	....	....	
....	....	....	+
....	....	....	

(2) 63 + 96 =

Hundreds	Tens	Ones	
....	....	....	
....	....	....	+
....	....	....	

(3) 70 + 88 =

Hundreds	Tens	Ones	
....	....	....	
....	....	....	+
....	....	....	

(4) 90 + 33 =

Hundreds	Tens	Ones	
....	....	....	
....	....	....	+
....	....	....	

(5) 71 + 61 =

Hundreds	Tens	Ones	
....	....	....	
....	....	....	+
....	....	....	

(6) 50 + 50 =

Hundreds	Tens	Ones	
....	....	....	
....	....	....	+
....	....	....	

(7) 90 + 19 =

Hundreds	Tens	Ones	
....	....	....	
....	....	....	+
....	....	....	

(8) 81 + 28 =

Hundreds	Tens	Ones	
....	....	....	
....	....	....	+
....	....	....	

(9) 47 + 81 =

Hundreds	Tens	Ones	
....	....	....	
....	....	....	+
....	....	....	

5 Read, then write the arithmetic operation and the answer:

(1) Mohamed read a book of 83 pages, then he read another book of 90 pages.
What is the total number of pages he read, Mohamed?

Arithmetic operation: ☆ .... Answer: ☆ ....

(2) Yara has 53 candy pieces and her sister has 66 candy pieces.

How many candy pieces do they have together? Answer: ☆ ....

(3) There are 11 teachers and 95 students in a field trip. What is the total number of people?

Arithmetic operation: ☆ .... Answer: ☆ ....

(4) Amir read 20 pages from the book and then read 99 more pages.
What is the total number of pages he read?

Arithmetic operation: ☆ .... Answer: ☆ ....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Ask your teacher

Lesson 2 Test Yourself

1 Choose the correct answer:

1) 55 + 46 = (100 , 101 , 110 , 91) .... (1)

2) 4 + 44 = (58 , 95 , 48 , 88) .... (2)

3) 400 + ... = 402 (400 , 25 , 500 , 2) .... (3)

4) .... = 7 tens (70 , 86 , 6 , 60) .... (4)

5) With 21 candies, I bought 91 more candies.
If the total number of candies is the same, then the missing number = ... candies.
(165 , 150 , 112 , 352) .... (5)

2 Find the sum of the following:

1) 45 + 61 = ...

2) 53 + 72 = ...

3) 65 + 72 = ...

4) 71 + 70 = ...

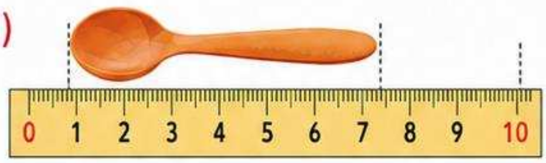
5) 66 + 36 = ...

6) 38 + 62 = ...

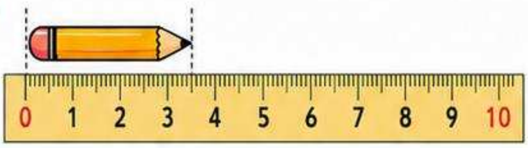
7) 38 + 73 = ...

8) 79 + 65 = ...

3 Write the lengths of the following objects:

1)


Length = ... ☆

2)


Length = ... ☆

4 Read, then write the arithmetic operation and the answer:

☆ A factory has 17 workers and 91 employees. What is the total number of people in the factory?

Arithmetic operation: .... Answer: ....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

LESSON 3&4&5

- Subtraction Using Regrouping (Borrowing from the Tens Place)
- Addition and Subtraction Using the Standard Method (Part 4)
- Addition and Subtraction Using the Standard Method (Part 5)

Learn Subtract a two-digit number from a three-digit number using regrouping.

First Subtraction using regrouping (borrowing from the hundreds place):

☆ When it is not possible to subtract the tens digit from the tens digit, regroup 1 hundred as 10 tens, then subtract the tens digits.

Example: The result of the subtraction 128 − 63 can be found using the place value table (the standard method) as follows:

1 Write 128 over 63 according to place value.

Hundreds	Tens	Ones
1	2	8
−	6	3

Do not put 0 in the tens place.

2 Subtract the ones digits: 8 − 3 = 5

Hundreds	Tens	Ones
1	2	8
−	6	3
		5

3 In the tens place, it is not possible to subtract 6 from 2, so regroup 1 hundred as 10 tens.

Hundreds	Tens	Ones
0 ~~1~~	12 ~~2~~	8
−	6	3
		5

4 Subtract the tens digits: 12 − 6 = 6

Hundreds	Tens	Ones
0	12	8
−	6	3
	6	5

☆ Therefore: 128 − 63 = 65

Example ❶ Find the result of each subtraction using the standard method:

[1] 135 − 61 [2] 108 − 38 [3] 144 − 90

Method

1

Hundreds	Tens	Ones
0 ~~1~~	13 ~~3~~	5
−	6	1
	7	4

Check: 74 + 61 = 135 ✓

2

Hundreds	Tens	Ones
0 ~~1~~	10 ~~0~~	8
−	3	8
	7	0

Check: 70 + 38 = 108 ✓

3

Hundreds	Tens	Ones
0 ~~1~~	14 ~~4~~	4
−	9	0
	5	4

Check: 54 + 90 = 144 ✓

Solve ❶ Find the result of each subtraction:

[1] 146 − 91

Hundreds	Tens	Ones
0 ~~1~~	14 ~~4~~	6
−	9	1
	5	5

Answer: ____________

[2] 108 − 28

Hundreds	Tens	Ones
0 ~~1~~	10 ~~0~~	8
−	2	8
	8	0

Answer: ____________

[3] 144 − 50

Hundreds	Tens	Ones
1	4	4
−	5	0
	9	4

Answer: ____________

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Second: Subtracting with regrouping (borrowing from the tens and hundreds places)

☆ When it is not possible to subtract the ones digits or the tens digits, regroup 1 from the next greater place. Then subtract the ones digits and the tens digits.

Worked Example: The result of 145 – 79 can be found using a place-value table (the standard method) as follows:

1 Write the numbers one under the other according to place value.

Hundreds	Tens	Ones	
1	4	5	
	7	9	–

2 In the ones place, 9 cannot be subtracted from 5, so regroup 1 ten as 10 ones. Then 15 – 9 = 6.

Hundreds	Tens	Ones	
1	3 ~~4~~	15 ~~5~~	
	7	9	–
		6	

3 In the tens place, 7 cannot be subtracted from 3, so regroup 1 hundred as 10 tens. Then 13 – 7 = 6.

Hundreds	Tens	Ones	
0 ~~1~~	13 ~~3~~	15 ~~5~~	
	7	9	–
	6	6	

☆ Therefore: 145 – 79 = 66

Example 2: Find the result of each subtraction using the standard method:

1 116 – 38 = 78

Step 1: Regroup in the ones place.

Hundreds	Tens	Ones	
1	0 ~~1~~	16 ~~6~~	
3		8	–
	7	8	

Step 2: Regroup in the tens place.

Hundreds	Tens	Ones	
0 ~~1~~	10 ~~0~~	16 ~~6~~	
3		8	–
	7	8	

2 147 – 49 = 98

Step 1: Regroup in the ones place.

Hundreds	Tens	Ones	
1	3 ~~4~~	17 ~~7~~	
4		9	–
	8	8	

Step 2: Regroup in the tens place.

Hundreds	Tens	Ones	
0 ~~1~~	13 ~~3~~	17 ~~7~~	
4		9	–
	9	8	

3 150 – 61 = 89

Step 1: Regroup in the ones place.

Hundreds	Tens	Ones	
1	4 ~~5~~	10 ~~0~~	
6		1	–
	4	9	

Step 2: Regroup in the tens place.

Hundreds	Tens	Ones	
0 ~~1~~	14 ~~4~~	10 ~~0~~	
6		1	–
	8	9	

Try: Find the result of each subtraction:

1 123 – 55 = ______

Hundreds	Tens	Ones	
			–

____

2 145 – 48 = ______

Hundreds	Tens	Ones	
			–

____

3 172 – 84 = ______

Hundreds	Tens	Ones	
			–

____

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Third: Subtracting with regrouping (borrowing from the hundreds place, then the tens place)

★ When it is not possible to subtract the ones digits and it is not possible to regroup from the tens place, first regroup 1 hundred as 10 tens. Then regroup 1 ten as 10 ones. Finally, subtract the ones digits and the tens digits.

Example: The result of 106 – 48 can be found using a place-value table (the standard method) as follows:

1. Write the numbers one under the other according to place value.

Hundreds	Tens	Ones
1	0	6
–	4	8

2. In the ones place, 8 cannot be subtracted from 6, and the tens digit is 0. Therefore, regroup 1 hundred as 10 tens.

Hundreds	Tens	Ones
~~1~~ 0	~~0~~ 10	6
–	4	8

3. Regroup 1 ten as 10 ones. Then 16 – 8 = 8, and the tens digit becomes 9.

Hundreds	Tens	Ones
0	~~10~~ 9	~~6~~ 16
–	4	8
		8

4. Subtract the tens digits: 9 – 4 = 5.

Hundreds	Tens	Ones
0	9	16
–	4	8
	5	8

Do not write 0 in the hundreds place.

★ **Therefore: 106 – 48 = 58**

Example 3 Find the result of each subtraction using the standard method:

1. 105 – 8 = 97

Hundreds	Tens	Ones
~~1~~ 0	~~0~~ 10	~~5~~ 15
–	9	8
	9	7

2. 100 – 42 = 58

Hundreds	Tens	Ones
~~1~~ 0	~~0~~ 10	~~0~~ 10
–	9	2
	5	8

3. 101 – 13 = 88

Hundreds	Tens	Ones
~~1~~ 0	~~0~~ 10	~~1~~ 11
–	9	3
	8	8

Try Find the result of each subtraction:

1. 106 – 38 = ______

Hundreds	Tens	Ones
		–

2. 100 – 17 = ______

Hundreds	Tens	Ones
		–

3. 104 – 47 = ______

Hundreds	Tens	Ones

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Homework

1 Find the result of the following:

١ $178 - 95 = \dots\dots$	٤ $135 - 65 = \dots\dots$	٣ $144 - 82 = \dots\dots$	4 $159 - 67 = \dots\dots$
٥ $184 - 61 = \dots\dots$	6 $165 - 75 = \dots\dots$	7 $175 - 94 = \dots\dots$	٨ $109 - 70 = \dots\dots$
٩ $154 - 65 = \dots\dots$	١٠ $121 - 72 = \dots\dots$	١١ $133 - 96 = \dots\dots$	12 $160 - 64 = \dots\dots$
13 $164 - 95 = \dots\dots$	14 $170 - 84 = \dots\dots$	١٥ $172 - 79 = \dots\dots$	16 $161 - 72 = \dots\dots$
17 $102 - 3 = \dots\dots$	١٨ $105 - 78 = \dots\dots$	19 $104 - 56 = \dots\dots$	٢٠ $108 - 19 = \dots\dots$
21 $100 - 39 = \dots\dots$	22 $103 - 75 = \dots\dots$	23 $102 - 7 = \dots\dots$	24 $101 - 8 = \dots\dots$

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

2 Find the result of each subtraction using the standard method:

1 126 − 32

	Hundreds	Tens	Ones
	....	....	....
−	....	....	....

2 102 − 71

	Hundreds	Tens	Ones
	....	....	....
−	....	....	....

3 139 − 62

	Hundreds	Tens	Ones
	....	....	....
−	....	....	....

4 188 − 97

	Hundreds	Tens	Ones
	....	....	....
−	....	....	....

5 129 − 46

	Hundreds	Tens	Ones
	....	....	....
−	....	....	....

6 145 − 80

	Hundreds	Tens	Ones
	....	....	....
−	....	....	....

7 111 − 18

	Hundreds	Tens	Ones
	....	....	....
−	....	....	....

8 134 − 36

	Hundreds	Tens	Ones
	....	....	....
−	....	....	....

9 170 − 85

	Hundreds	Tens	Ones
	....	....	....
−	....	....	....

10 157 − 72

	Hundreds	Tens	Ones
	....	....	....
−	....	....	....

11 121 − 88

	Hundreds	Tens	Ones
	....	....	....
−	....	....	....

12 140 − 44

	Hundreds	Tens	Ones
	....	....	....
−	....	....	....

13 100 − 9

	Hundreds	Tens	Ones
	....	....	....
−	....	....	....

14 100 − 25

	Hundreds	Tens	Ones
	....	....	....
−	....	....	....

15 108 − 71

	Hundreds	Tens	Ones
	....	....	....
−	....	....	....

16 104 − 5

	Hundreds	Tens	Ones
	....	....	....
−	....	....	....

17 100 − 4

	Hundreds	Tens	Ones
	....	....	....
−	....	....	....

18 103 − 88

	Hundreds	Tens	Ones
	....	....	....
−	....	....	....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

3 Subtract:

1. 148 − 55 = ...
2. 166 − 76 = ...
3. 150 − 60 = ...
4. 112 − 61 = ...
5. 130 − 40 = ...
6. 111 − 21 = ...
7. 178 − 99 = ...
8. 155 − 65 = ...
9. 140 − 45 = ...
10. 173 − 65 = ...
11. 154 − 88 = ...
12. 187 − 79 = ...
13. 100 − 8 = ...
14. 100 − 11 = ...
15. 100 − 52 = ...
16. 101 − 27 = ...
17. 108 − 39 = ...
18. 107 − 66 = ...

4 Subtract, then connect with the correct result:

1. 102 − 7
2. 167 − 73
3. 122 − 29
4. 100 − 8

92	93	94	95

5 Find the result, then compare using (= or < or >):

1. 123 − 33 ☐ 80 − 35
   ....
2. 100 − 25 ☐ 95 − 18
   ....
3. 108 − 40 ☐ 108 − 39
   ....
4. 165 − 75 ☐ 45 + 45
   ....
5. 182 − 91 ☐ 90 + 7
   ....
6. 143 − 54 ☐ 143 − 45
   ....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

1 Read, then write the arithmetic operation and the answer:

1. There are 148 people on the bus, 57 of them get off at the next stop.
   How many people are left on the bus?
   Operation: ☆ .... Answer: ☆ ....

2. Hind had 144 seeds, and she gave 51 of them to her sister.
   How many seeds are left with Hind?
   Operation: ☆ .... Answer: ☆ ....

3. Rania has 160 flowers, she planted 65 of them in the garden.
   How many flowers are left with her?
   Operation: ☆ .... Answer: ☆ ....

4. Samir has 140 pounds and Ashraf has 94 pounds.
   What is the difference between their amounts?
   Operation: ☆ .... Answer: ☆ ....

5. You have 100 pieces of candy, you ate 5 pieces.
   How many pieces of candy are left?
   Operation: ☆ .... Answer: ☆ ....

6. In the sea there are 108 different types of fish, and 10 of them are sharks.
   How many other types of fish are there in the sea?
   Operation: ☆ .... Answer: ☆ ....

7. You have 102 colored sheets of paper, you used 35 sheets.
   How many colored sheets are left with you?
   Operation: ☆ .... Answer: ☆ ....

8. The number of male and female teachers in the school is 131,
   and the number of female teachers is 62.
   How many male teachers are in the school?
   Operation: ☆ .... Answer: ☆ ....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Remember the page number

Up to Lesson 5

Test Yourself

1 Choose the correct answer:

(1) 125 – 45 = ______ (81, 80, 99, 91)

(2) 134 – 51 = ______ (89, 66, 70, 83)

(3) 100 – 9 = ______ (109, 91, 80, 99)

(4) 101 – 17 = ______ (40, 48, 80, 84)

(5) Ahmed has 113 balls and his brother has 67 balls. The difference between their numbers of balls is ______ balls. (46, 40, 64, 39)

2 Subtract:

(1) 155 – 50 = ________ (2) 149 – 86 = ________ (3) 164 – 72 = ________

(4) 123 – 43 = ________ (5) 111 – 19 = ________ (6) 100 – 17 = ________

(7) 100 – 8 = ________ (8) 107 – 18 = ________ (9) 108 – 23 = ________

3 Compare using (>, <, or =):

(1) 8 cm ______ 70 mm

(2) 7 tens ______ 80

(3) 13 + 25 ______ 25 + 13

(4) 245 ______ 425

(5) 15 + 3 ______ 28

(6) 100 – 10 ______ 80

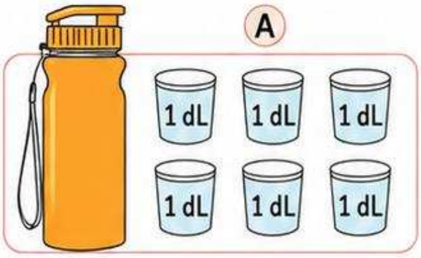
4 Read, then answer:

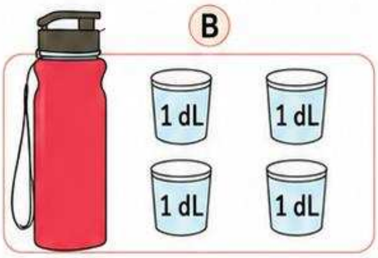
(1) You have 102 colored sheets. You used 35 colored sheets. How many colored sheets are left?

Number sentence: ________________________

Answer: ________________________

(2) The capacities of bottles A and B are measured using 1-dL cups:





☆ What is the capacity of bottle A and bottle B, respectively, in deciliters?

....

☆ Which bottle holds more water, A or B?

....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Lesson 6 Addlition and Subtraction Using the Standard Method (Part 6)

Learn 1 Adding a three-digit number and a two-digit number

The sum of 457 + 45 can be found using a place-value table (the standard method) as follows:

Worked Example

1 Add the ones digits:
7 + 5 = 12
Write 2 in the ones place and carry 1 to the tens place.

Hundreds	Tens	Ones
	1	
4	5	7
+	4	5
	•	2

2 Add the tens digits:
1 + 5 + 4 = 10
Write 0 in the tens place and carry 1 to the hundreds place.

Hundreds	Tens	Ones
1		
4	5	7
+	4	5
	0	2

3 Add the hundreds digits:
1 + 4 = 5
Write 5 in the hundreds place.

Hundreds	Tens	Ones
1		
4	5	7
+	4	5
5	0	2

☆ **Therefore: 457 + 45 = 502**

Example 1 Find the result of each addition using the standard method:

1 418 + 9 = 427

Hundreds	Tens	Ones
	1	
4	1	8
+		9
4	2	7

2 237 + 55 = 292

Hundreds	Tens	Ones
	1	
2	3	7
+	5	5
2	9	2

3 708 + 15 = 723

Hundreds	Tens	Ones
	1	
7	0	8
+	1	5
7	2	3

Try Find the result of each addition:

1 366 + 54 = ______

Hundreds	Tens	Ones
+		

______

2 645 + 9 = ______

Hundreds	Tens	Ones
+		

______

3 718 + 99 = ______

Hundreds	Tens	Ones
+		

______

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Learn 2 Subtracting a two-digit number from a three-digit number

Worked Example The result of 642 – 48 can be found using a place-value table (the standard method) as follows:

1 In the ones place, 8 cannot be subtracted from 2, so regroup 1 ten as 10 ones. Then 12 – 8 = 4.

	Hundreds	Tens	Ones
	6	3 ~~4~~	12 ~~2~~
–		4	8
	5	9	4

2 In the tens place, 4 cannot be subtracted from 3, so regroup 1 hundred as 10 tens. Then 13 – 4 = 9.

	Hundreds	Tens	Ones
	5 ~~6~~	13 ~~3~~	12
–		4	8
	5	9	4

3 Bring down the hundreds digit (5) as it is.

	Hundreds	Tens	Ones
	5	13	12
–		4	8
	5	9	4

Therefore: 642 – 48 = 594

Example 2 Find the result of each subtraction using the standard method:

1 315 – 6 = 309

	Hundreds	Tens	Ones
	3	0 ~~1~~	15 ~~5~~
–			6
	3	0	9

2 625 – 40 = 585

	Hundreds	Tens	Ones
	5 ~~6~~	12 ~~2~~	5
–		4	0
	5	8	5

3 708 – 19 = 689

	Hundreds	Tens	Ones
	6 ~~7~~	10 ~~0~~	18 ~~8~~
–		1	9
	6	8	9

Try Find the result of each subtraction:

1 625 – 9 = ______

	Hundreds	Tens	Ones
–			

2 474 – 80 = ______

	Hundreds	Tens	Ones
–			

3 686 – 98 = ______

	Hundreds	Tens	Ones
–			

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Adding a three-digit number and a two-digit number

1 Find the sum:

(1)

	Hundreds	Tens	Ones
	5	2	6
+		5	4
	....	....	....

(2)

	Hundreds	Tens	Ones
	3	4	2
+		2	9
	....	....	....

(3)

	Hundreds	Tens	Ones
	4	6	5
+		1	7
	....	....	....

(4)

	Hundreds	Tens	Ones
	7	3	7
+		5	7
	....	....	....

(5)

	Hundreds	Tens	Ones
	2	5	4
+		2	8
	....	....	....

(6)

	Hundreds	Tens	Ones
	7	2	2
+		4	8
	....	....	....

(7)

	Hundreds	Tens	Ones
	5	2	7
+		1	8
	....	....	....

(8)

	Hundreds	Tens	Ones
	6	2	5
+		3	5
	....	....	....

(9)

	Hundreds	Tens	Ones
	1	1	9
+		3	4
	....	....	....

(10)

	Hundreds	Tens	Ones
	4	3	8
+		3	6
	....	....	....

(11)

	Hundreds	Tens	Ones
	2	4	4
+		2	8
	....	....	....

(12)

	Hundreds	Tens	Ones
	4	3	9
+		4	1
	....	....	....

2 Find the sum of each using the standard method:

(1) 156 + 38 = ________
(2) 615 + 55 = ________
(3) 131 + 59 = ________
(4) 263 + 19 = ________
(5) 451 + 29 = ________
(6) 717 + 38 = ________
(7) 421 + 49 = ________
(8) 246 + 26 = ________
(9) 378 + 23 = ________
(10) 129 + 28 = ________
(11) 643 + 68 = ________
(12) 126 + 14 = ________

3 Read, then write the number sentence and the answer:

(1) I read 65 pages yesterday and 125 pages today. How many pages did I read altogether?

Number sentence: ☆ ________________ Answer: ☆ ________________

(2) A merchant sold 25 mobile phones, then sold 216 mobile phones the next day. How many mobile phones did he sell over the two days?

Number sentence: ☆ ________________ Answer: ☆ ________________

(3) Ahmed bought a shirt for 524 pounds and a pen for 39 pounds. How much did Ahmed pay?

Number sentence: ☆ ________________ Answer: ☆ ________________

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Subtracting a two-digit number from a three-digit number

4 **Find the difference:**

①
	Hundreds	Tens	Ones
	4	7	4
−			5
	....	....	....

②
	Hundreds	Tens	Ones
	2	5	6
−		2	8
	....	....	....

③
	Hundreds	Tens	Ones
	7	4	4
−		3	6
	....	....	....

④
	Hundreds	Tens	Ones
	4	3	5
−		2	7
	....	....	....

⑤
	Hundreds	Tens	Ones
	4	6	7
−		3	8
	....	....	....

⑥
	Hundreds	Tens	Ones
	5	6	1
−			7
	....	....	....

⑦
	Hundreds	Tens	Ones
	6	4	3
−			9
	....	....	....

⑧
	Hundreds	Tens	Ones
	3	1	2
−			8
	....	....	....

⑨
	Hundreds	Tens	Ones
	7	6	6
−		4	9
	....	....	....

⑩
	Hundreds	Tens	Ones
	2	8	7
−		4	8
	....	....	....

⑪
	Hundreds	Tens	Ones
	6	7	8
−		2	9
	....	....	....

⑫
	Hundreds	Tens	Ones
	5	7	3
−			5
	....	....	....

---

5 **Find the difference of each using the standard method:**

① 564 − 8 = ____________ ② 615 − 9 = ____________ ③ 571 − 62 = ____________

④ 911 − 6 = ____________ ⑤ 813 − 7 = ____________ ⑥ 782 − 17 = ____________

⑦ 546 − 37 = ____________ ⑧ 321 − 16 = ____________ ⑨ 378 − 29 = ____________

⑩ 280 − 88 = ____________ ⑪ 357 − 28 = ____________ ⑫ 333 − 14 = ____________

---

6 **Read, then write the number sentence and the answer:**

① A book has 137 pages. I read 19 pages. How many pages have I not read yet?

Number sentence: ☆ ______________________ Answer: ☆ ______________________

② A toy shop had 214 toys. It sold 9 toys. How many toys are left in the shop?

Number sentence: ☆ ______________________ Answer: ☆ ______________________

③ Hadeer has 254 pounds. She bought a pen for 28 pounds. How much money does Hadeer have left?

Number sentence: ☆ ______________________ Answer: ☆ ______________________

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Test on Chapter 8

1 Choose the correct answer:

① 7 liters = ______ deciliters.	7	70	700	71
② 55 + 77 = ______ .	132	123	321	213
③ 700 + 50 = ______ .	507	705	75	750
④ 12 + 13 = 12 + ______ .	13	25	12	15
⑤ 9 tens = ______ .	900	91	19	90
⑥ The number that is 50 less than 200 is ______.	300	250	350	150

2 Complete:

① 460 is the result of adding ______ tens.

② The number "three hundred and seven" is written ______ .

③ 11 cm and 8 mm - 7 mm = ______ mm.

④ Rasha wakes up at 6:00.
at ______ .

⑤ 386 + 19 = ______

⑥ 185 − 94 = ______

⑦ 54 − 26 = ______

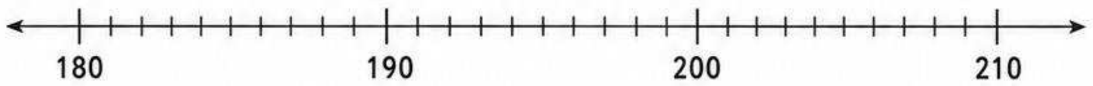
⑧ 35 − 8 = ______

3 Compare using (>, <, or =):

①	167	☐	216
②	400	☐	310
③	200	☐	200 + 7
④	1 hour	☐	60 minutes
⑤	80 deciliters	☐	7 liters
⑥	101 − 8	☐	100

4 Answer the following:

① Draw an upward arrow at the tick mark that represents 203.



② Nada read 79 pages of a book, then read 80 pages the next day. What is the total number of pages she read over the two days?

Number sentence: ☆ ______________________

Answer: ☆ ______________________

③ A container holds 2 liters and 5 deciliters of water, and a bottle holds 2 deciliters of water. What is the total amount of water?

Number sentence: ☆ ______________________

Answer: ☆ ______________________

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Chapter 9

Addition and Subtraction

Using Mental Calculation Strategies

LESSON OBJECTIVES

1 **Lesson (1): Addition and Subtraction Using Mental Calculation Strategies (Part 1)**

- Get to know the properties of adding numbers.
- Use the properties of addition to find easy addition results.
- Solve mathematical problems on addition.

2 **Lesson (2): Addition and Subtraction Using Mental Calculation Strategies (Part 2)**

- Add two numbers by breaking one of them into two different addends.
- Add two numbers by breaking one number into two different addends.
- Solve mathematical problems on addition and subtraction.

3 **Lesson (3): Addition and Subtraction Using Mental Calculation Strategies (Part 3)**

- Add two numbers by breaking one of them into two different multiples of ten.
- Add two numbers by breaking one of them into two different multiples of ten.
- Solve mathematical problems on addition and subtraction.

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Lesson 1 Mental Math Strategies (Part 1)

Properties of Addition

First: The Commutative Property

⭐ When the order of two addends is changed, the sum remains the same.

Example

6 + 15 = 15 + 6
21 = 21

Or

8 + 14 + 2 = 8 + 2 + 14
24 = 24

⭐ We use the commutative property to make addition easier.

Second: The Associative Property (Grouping with Parentheses)

⭐ When adding three numbers, we can use parentheses to choose which two numbers to add first.

Example

15 + 6 + 4
= 15 + (6 + 4)
= 15 + 10
= 25

Remember: Add the numbers inside the parentheses first.

Example 1 Write the missing numbers using the commutative property, then find the sum:

⭐ In addition, changing the order of the addends does not change the sum.

1. 12 + 19 = 19 + 12
   31 = 31
2. 25 + 7 = 7 + 25
   32 = 32
3. 30 + 14 = 14 + 30
   44 = 44

Try Write the missing numbers using the commutative property, then find the sum:

1. 14 + 17 = _____ + 14
   _____ = _____
2. 17 + 33 = 33 + _____
   _____ = _____
3. 22 + 8 = _____ + 22
   _____ = _____

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Example 2 **Complete by writing the missing numbers to find each sum:**

1. 15 + (2 + 8) = 15 + ______
   = ______
2. 10 + (23 + 17) = 10 + ______
   = ______

Method

☆ Add the numbers inside the parentheses first.

1. 15 + (2 + 8) = 15 + 10
   = 25
2. 10 + (23 + 17) = 10 + 40
   = 50

Example 3 **Use parentheses to find each sum:**

1. 4 + 12 + 8

Method

4 + (12 + 8)
= 4 + 20
= 24

☆ Use parentheses to make 20.

2. 9 + 28 + 1

Method

28 + 1 + 9
= 28 + (1 + 9)
= 28 + 10
= 38

☆ Change the order of the addends.

☆ Use parentheses to make 10.

Example 4 **Read and write the number sentence in two different ways using parentheses, then find the answer:**

A park has 9 boys and 12 girls.
Then 8 more girls joined them.
☆ What is the total number of children in the park?

Method

First method:

Number sentence: 9 + (12 + 8)
9 + 20 = 29
Answer: 29 children

Second method:

Number sentence: (9 + 12) + 8
21 + 8 = 29
Answer: 29 children

Try 2 ✓ **Complete by writing the missing numbers to find each sum:**

1. 23 + (11 + 9) = 23 + ______
   = ______
2. 27 + (14 + 16) = 27 + ______
   = ______

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Homework

1 Write the missing numbers correctly for the following additions:

1. 15 + 4 = 4 + ...
2. 20 + ... = 33 + 20
3. 12 + ... = 18 + 12
4. 5 + 45 = 45 + ...
5. 100 + 200 = ... + 100
6. 7 + 19 = ... + 7
7. 11 + 60 = 11 + ...
8. 20 + 35 = 35 + ...
9. 8 + ... = 42 + 8
10. 13 + ... = 27 + ...
11. .... + 10 = ... + 55
12. 11 + ... = 9 + ...
13. .... + 11 = 11 + 60
14. 100 + ... = ... + 100
15. 4 + ... = 4 + 15
16. 60 + ... = 11 + 11
17. 12 + 17 = 17 + 12
18. 9 + 8 = 8 + 9
19. 20 + ... = 33 + 20
20. 13 + ... = 27 + ...

2 Match each addition on the top with its correct result at the bottom:

1. 15 + 4
2. 7 + 13
3. 9 + 8
4. 12 + 17
5. 20 + 42

| 17 | 8 + 9 | 20 + 42 | 15 + 4 | 13 + 7 |

3 Write the missing numbers in the additions below, then find the result:

1. 16 + ... = 16 + (14 + 9)
   = ...
2. 3 + ... = 3 + (4 + 6)
   = ...
3. 1 + ... = 1 + (5 + 14)
   = ...
4. 9 + ... = 9 + (2 + 8)
   = ...
5. .... + 9 = (16 + 14) + 9
   = ...
6. .... + 17 = (9 + 1) + 17
   = ...
7. .... + 25 = (5 + 5) + 25
   = ...
8. .... + 23 = (6 + 14) + 23
   = ...

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

4 Use the numbers and create a correct addition sentence:

1. 2 + 3 + 5 ....
2. 7 + 4 + 6 ....
3. 11 + 9 + 6 ....
4. 25 + 18 + 2 ....
5. 9 + 1 + 15 ....
6. 8 + 16 + 4 ....
7. 3 + 28 + 7 ....
8. 21 + 16 + 9 ....

5 Read, write the arithmetic operation in two different ways, then find the answer:

1. Ahmed bought 7 red pens and 3 blue pens, then he bought 5 green pens.
What is the total number of pens for Ahmed?

Method One:
Arithmetic operation: ....
Answer: ....

Method Two:
Arithmetic operation: ....
Answer: ....

2. There are 9 boys and 15 girls in the park, then 5 other girls arrived.
What is the total number of individuals?

Method One:
Arithmetic operation: ....
Answer: ....

Method Two:
Arithmetic operation: ....
Answer: ....

3. There are 8 students in the first grade and 13 students in the second grade playing in the school yard, then 7 more students from the second grade joined.
What is the total number of students now?

Method One:
Arithmetic operation: ....
Answer: ....

Method Two:
Arithmetic operation: ....
Answer: ....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Remember the page number.

1 Up to Lesson 1 **Test Yourself**

1 Choose the correct answer:

① 59 + 32 = ______ + 59.	(59)	(91)	(32)	(23)
② 12 + (25 + 5) = 12 + ______.	(30)	(5)	(12)	(25)
③ 1 hour and 15 minutes = ______ minutes.	(70)	(75)	(80)	(85)
④ 7 liters = ______ deciliters.	(7)	(70)	(700)	(17)
⑤ 820 = 20 + ______.	(8)	(80)	(800)	(88)

2 Use parentheses to find each sum:

① 2 + 3 + 5

....

② 6 + 4 + 7

....

③ 6 + 9 + 11

....

④ 25 + 18 + 2

....

3 Find the result:

① 157 + 23 = ______	② 300 + 20 = ______	③ 369 + 54 = ______
④ 68 – 29 = ______	⑤ 265 – 48 = ______	⑥ 440 – 40 = ______

4 Read and write the number sentence in two different ways using parentheses, then find the answer:

① There were 12 children in the park. Then 8 more children came, followed by another 23 children. What is the total number of children?

First method:
Number sentence: ______ ☆
Answer: ______ ☆

Second method:
Number sentence: ______ ☆
Answer: ______ ☆

② Mohamed has 14 pounds. His father gave him 28 pounds, and his mother gave him 12 pounds. What is the total amount of money Mohamed has?

First method:
Number sentence: ______ ☆
Answer: ______ ☆

Second method:
Number sentence: ______ ☆
Answer: ______ ☆

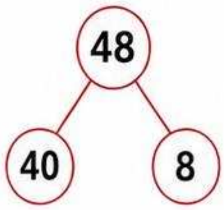
D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Lesson 2 Mental Math Strategies (Part 2)

Adding and Subtracting to Make 10 or Its Multiples

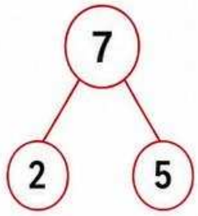
Learn The sum of 48 + 7 can be found in two ways: **First: Addition**

1 Decompose the larger number (48)



- Decompose 48 into 40 and 8.
- Add: 8 + 7 = 15
- Then add: 40 + 15 = 55

2 Decompose the smaller number (7)

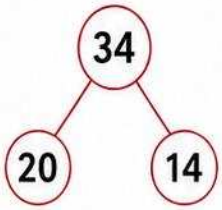


- Decompose 7 into 2 and 5.
- Add: 48 + 2 = 50
- Then add: 50 + 5 = 55

Therefore: 48 + 7 = 55

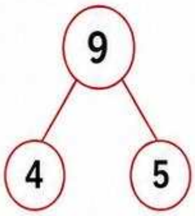
The difference 34 – 9 can be found in two ways: **Second: Subtraction**

1 Decompose the larger number (34)



- Decompose 34 into 20 and 14.
- Subtract: 14 – 9 = 5
- Then add: 20 + 5 = 25

2 Decompose the smaller number (9)

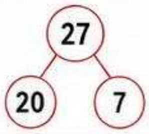


- Decompose 9 into 4 and 5.
- Subtract: 34 – 4 = 30
- Then subtract: 30 – 5 = 25

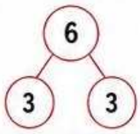
Therefore: 34 – 9 = 25

Example Find each result in two different ways:

1 27 + 6 **Method**



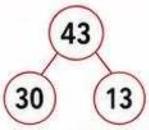
- Add: 7 + 6 = 13
- Then add: 20 + 13 = 33



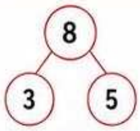
- Add: 27 + 3 = 30
- Then add: 30 + 3 = 33

Therefore: 27 + 6 = 33

2 43 – 8 **Method**



- Subtract: 13 – 8 = 5
- Then add: 30 + 5 = 35



- Subtract: 43 – 3 = 40
- Then subtract: 40 – 5 = 35

Therefore: 43 – 8 = 35

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Homework

1 Find each sum in two different ways:

① 18 + 8 = ______

18 + 8 .... 18 + 8 ....

② 39 + 7 = ______

39 + 7 .... 39 + 7 ....

③ 47 + 8 = ______

47 + 8 .... 47 + 8 ....

④ 84 + 7 = ______

84 + 7 .... 84 + 7 ....

2 Find each difference in two different ways:

① 22 − 6 = ______

22 − 6 .... 22 − 6 ....

② 47 − 9 = ______

47 − 9 .... 47 − 9 ....

③ 62 − 5 = ______

62 − 5 .... 62 − 5 ....

④ 75 − 8 = ______

75 − 8 .... 75 − 8 ....

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

3 **Match each expression with another expression that has the same result:**

(1) 49 + 3 (2) 65 − 9 (3) 28 + 4 (4) 13 − 5 (5) 57 + 6

60 − 4 | 50 + 2 | 30 + 2 | 10 − 2 | 60 + 3

4 **Read, then write the number sentence and the answer:**

(1) There are 34 birds on a tree. Another 8 birds joined them. What is the total number of birds?

Number sentence: ☆ ____________ Answer: ☆ ____________

(2) There were 37 people on a bus. At a bus stop, 8 more people got on.
How many people are on the bus now?

Number sentence: ☆ ____________ Answer: ☆ ____________

(3) There were 45 people on a bus. At a bus stop, 9 people got off.
How many people are on the bus now?

Number sentence: ☆ ____________ Answer: ☆ ____________

(4) Maryam baked 67 pieces of cake in the morning and ate 9 pieces in the evening.
How many pieces are left?

Number sentence: ☆ ____________ Answer: ☆ ____________

Multiple-Choice Questions

5 **Choose the correct answer:**

(1) 15 + 7 = 20 + ____.	1	2	3	4
(2) 55 − 7 = 50 − ____.	5	7	3	2
(3) 43 + 9 = (43 + 7) + ____.	7	5	9	2
(4) 5 + 18 = ____.	10 + 8	20 + 5	20 + 3	12 + 8

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

Test on Chapter 9

1 Choose the correct answer:

1. 26 + 47 = ________ + 26. (26, 47, 73, 74)
2. 35 + ________ = 35 + 75. (110, 35, 75, 73)
3. 15 + (26 + 14) = 15 + ________. (26, 29, 40, 14)
4. 14 + (________ + 7) = 14 + 20. (14, 20, 13, 3)
5. 25 + 37 = 32 + (________ + 25). (5, 12, 37, 20)

2 Use parentheses to find each sum:

(1) 5 + 15 + 21

....

(2) 14 + 16 + 12

....

(3) 81 + 1 + 9

....

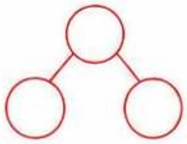
(4) 26 + 27 + 3

....

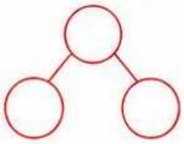
3 Find each result in two different ways:

(1) 28 + 3 = ______

28 + 3



28 + 3

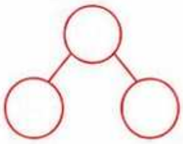


....

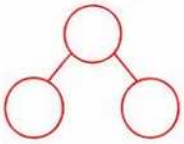
....

(2) 67 − 9 = ______

67 − 9



67 − 9



....

....

4 Read and write the number sentence in two different ways using parentheses, then find the answer:

On a school trip, 30 students rode on the first bus, 25 students rode on the second bus, and 15 students rode on the third bus. What is the total number of students on the trip?

First method:

Number sentence: ☆ ________________________

Answer: ☆ ________________________

Second method:

Number sentence: ☆ ________________________

Answer: ☆ ________________________

D.M.RAZK موقع الدكتور محمد رزق معلم الكيمياء التعليمي

موقع الدكتور محمد رزق
Dr.Mo.RizK

موقع الدكتور محمد رزق معلم الكيمياء التعليمي D.M.RAZK